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ORIGINAL ARTICLES.

THE CARE OF PREGNANT WOMEN.*

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The study of the diseases and difficulties encountered with a state of pregnancy and parturition, though highly interesting and having at all times attracted the greatest attention of physicians, is, however, exceedingly difficult. This circumstance probably atones for the fact that our obstetrical literature still continues to be full of errors. By consulting the best practical writers, missionaries, and travelers, the revelation comes that it is among the higher classes in the more civilized countries—Europe and North America—that women suffer the greater in both pregnancy and parturition; but that the women of the peasantry and the savage are comparatively exempt. We may therefore very naturally and wisely conclude that it is unnatural for civilized woman to suffer so universally as she does to-day; and that civilization in disobedience to the law of Nature, is the true cause of her present suffering during gestation and childbirth.

It is ignorance, as well as carelessness and viciousness, that has brought about the existing abnormal condition of civilized women. Thus, through unwholesome civilization have come fixed habits of excesses; and if excesses must be indulged, evil consequences will follow and must be endured; for Nature's law would have to be changed before they could be either prevented or banished by any method of treatment. It follows, then, as a natural consequence that to prevent these sufferings will depend, not so much on treatment by application or administration of therapeutic agents, as on the successful education and training of these women, so that they will learn to know how to—and will actually—cultivate the necessary self-discipline requisite to enable them to prevent the continuous irritation from excesses in their modes and habits of life. If the writer's observations have been correct and unprejudiced, it seems that a revival of learning in obstetric science must needs be instituted among us, destined to find the true cause or causes of the unnatural and needless suffering of civilized women. The progress of obstetrics in the immediate future must be made through the knowledge that will be wrought out by the devotees of biology. Thus, we shall find our way, on positive ground back through the morphology of organs, tissues, cells and blood, to a clear comprehension of the origin of vital activity in protoplasm and the pabulum which sustains it. This is the only way open for us into the primitive arcana of nature, if we would have the wisdom essential to intelligently inculcate that regimen which will sucessfully prevent the needless sufferings of pregnant and parturient women.

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The future distinction of obstetric science can obtain only by an advanced study of human biology. When this truth is propounded, there opens before the thinking mind a vista so transcending all ordinary limitations of obstetrical knowledge, as requires such genius and expansion of the mental eye in order to embrace it in its simplicity as scarce yet obtains. It remains, then, for our guild, to endeavor by rigid scientific investigation through advanced biologic studies, to make patent the causes of the sufferings of pregnant and parturient women, and to determine exact measures for emasculating these causes, or for neutralizing their effects whenever they have eluded detection or escaped emasculation. Thus, by directing our studies chiefly in relation to etiology and diagnosis, and having learned to know the true cause it will become easy to intelligently establish prevention; while, with a correct diagnosis, treatment will become easy.

I verily believe that the next coming great advance in this, our special branch of medical science, will be in our bringing home to the general practitioner the fact that the diseases peculiar to women during pregnancy and parturition are very largely preventable; to make him feel his responsibility, both as to their production after the present generally prevailing methods of practice, and also as to the possibilities of their prevention after improved methods. The family physician must be fully aroused to the conscious realization of the fact that it lies within his power very largely to prevent many of the diseases among the women of the families intrusted to his care. When this obtains, his moral obligation will impel him to promptly do his full duty, by giving adequate instructions concerning the ill effects of improper posture, dress, food, drink, and erroneous habits of living, including the non-forbearance of indiscriminate, excessive and impure sensual indulgences. Then it will come to pass that the wholesome forbearance of coitus during the entire period of gestation, the puerperium, and three months thereafter, will be insisted upon; together with correct posturing and dressing, proper food and drink, and healthful habits of living. Aseptic accouchments will be faithfully and efficiently practiced; lacerations of the cervix and perineum will be more frequently prevented, and when they do unavoidably occur will be early repaired; rectal and vesical troubles will be corrected in due season; gonorrhea and syphilis will be also more frequently prevented, and when encountered will be more vigorously treated and kept under surveillance until all discharge and sequela are arrested. And, what will be of far greater benefit to mankind, there will be given the requisite attention to the growing girls, with special care about the years of puberty, that more vigorous bodies and more normal reproductive organs be developed. A positive, clear and convincing protest will be made against the present unwholesome state of society which is now urging our girls on to a degree of emasculated physical corruption, by luxurious indolence, deleterious dress and sensual excess, and superbly fits them to live in communities by themselves—in women's hotels—whereby they become ruined for wifely companionship and sturdy maternity. When that day comes —as I verily believe it to be within the province of our intelligence to successfully inculcate—then, and not until then, may we hope to find that the prevalence of diseases among civilized women will cease to be a reproach to preventive medicine. Then will authors and teachers find it necessary to discontinue defining woman as "an animal with a constipated bowel and a pain in her side."

But as yet, at present we are compelled to meet the situation as we find it. The condition of the suffering of the civilized women of the present generation, however grossly unnatural it has been cultivated, must needs have our most careful attention and require our wisest judgment, lest we fail to institute proper treatment for their relief. In the care of pregnant women much of great importance devolves upon the obstetrician, with regard to safely conducting the mother through the period of gestation, parturition, and the puerperium; the preservation of the life and healthful condition of the child; and his own reputation. The diseases of pregnancy unquestionably is a field only partially and imperfectly explored. When we take into consideration how much of accident might be avoided and how much real good done to this class of suffering women by proper care, it places us at a loss to account for the fact that ob-

stetricians have hitherto neglected their duties, by signally manifesting a want of endeavor to promote the advance of obstetric science, in a direction quite worthy of the profoundest investigation. It is a noteworthy fact that the conditions which beget the disorders of pregnancy are not thoroughly treated by any of the standard works upon obstetrics. We are so busy thinking, discussing, defending, inquiring, practicing and teaching about the better modes of alleviating human suffering that we have no time and no leisure of mind for quiet contemplation, to allow the exercise of the intellect to feed upon Nature's truth, without which it is impossible to obtain a clear knowledge of the real causes and how to successfully prevent them. Communion with Nature was never more needful than now. Feverish activity rules all spheres of life. Medical effort is multiplied and systematized beyond all precedent. And all these things make calm fellowship with Nature hard to compass. We can conquer Nature only by obeying her laws, and in order to obey those laws we must first learn what they are.

For the convenience of our consideration, the paramount duties of the obstetrician in the study and care of pregnant women may be classified as follows:

1. To discover if the patient be actually pregnant.

2. To determine positively if the impregnation be uterine or normal, as contradistinguished from tubal, abdominal, or abnormal pregnancy.

3. To carefully note the pregnant woman's history, including her age, primiparity or multiparity, environments, station in life, general condition of health, period of gestation; as well as her dress, food, drink, and habits of life. To make repeated examinations of the urine and ascertain the temperature, from the time pregnancy is established to the termination of gestation.

4. To make a physical examination for the purpose of accurately determining the diameters of the pelvic straits; the symmetry and size of the bony outlet; the integrity, condition, and position of the vagina, uterus, and other inter-pelvic viscera and adjacent structures; the state of the abdominal muscles; the presence or absence of hernia, varicose veins, tumors, etc.; the shape, size and condition of the breasts and nipples; the condition of the heart, lungs, mind, stomach, bowels, etc.

5. To observe the state of the fetus, its strength and viability, as well as the implantation of the placenta.

These must all be included in the search for intelligent guidance as to how the proper management of the pregnant woman should be conducted. With regard to the first, all experienced observers have found that psychologic phenomena often call for an intimate study and wise differentiation of every form of hallucination, delusion, illusion, as well as the deilrium of cerebral hyperemia, or the frenzy of the maniac, from toxemia and eccentric irritabilities. And, that such abnormal conditions frequently exist unrecognized, and so continue until they eventually establish their peculiar fixed impress upon the mind and nervous system. Thus when the paranoiac woman simulated pregnancy, and even parturition, she deceived the better judgment of some of the most skilled obstetricians. Pseudocyesis and pseudotocia are recognized abnormal conditions, which so closely resemble the normal condition of pregnancy, and the beginning of parturition, as to demand our highest discriminative faculties in arriving at an intelligently correct diagnosis.

As to the second, it remains a simple self-evident fact that it should always be positively determined whether the impregnation be uterine or extra-uterine. How to intelligently differentiate normal or uterine from abdominal pregnancy, time forbids to discuss fully in this connection; suffice to say that it may be made by careful palpation of the abdominal parieties, together with vaginal and rectal digital examination and proper posturing. Paracyesis and interstitial or cornuate fetation are purposely omitted, as such accidents can scarce be diagnosed at a sufficiently early period of gestation to be of actual benefit. Abnormal implantation of the fetus constitutes a most important class of cases with which the accoucheur has to contend. Extra uterine or tubal pregnancy is rarely suspected until after certain dangerous and distinct symptoms are manifested, chiefly because no opportunity is had to discover it. These symptoms are such as follow rupture of the cyst containing the embryo with intra-

pelvic, or interperitoneal hemorrhage and shock; as sudden seizure of violent agonizing pain in the lower abdomen, fainting, pale, or anemic surface of the body, cold clammy skin, rapid and almost imperceptible pulse, sighing respiration, etc. Whenever extra-uterine fetation is discovered, either before or after the rupture of the cyst, the question of treatment is a very grave one. But experience teaches us that this truly marvelous and murderous condition admits of only one line of action to be followed with any degree of ultimate safety to the life of the pregnant woman. Section must be done. No other line of treatment that has been advanced is so rational and certain in the ultimate saving of life as abdominal section. The perfected technique, as we have it today, makes it a safe procedure. We must, however, bear well in mind what experience also teaches us, namely: that when the placenta is found still in the tubal sac it is best to enucleate and remove all—the tubal sac and ovary; but that whenever the placenta is found partially or wholly out of the tubal sac and adherent to the peritoneum, bowel, etc., and still alive, the very best that can be done is to let it alone—to keep hands off. In these cases the ultimate safety of the patient lies in removal of the fetus, cleaning out the peritoneum of blood clots and all other *débris,* ligating the bleeding vessels, pack with iodoform gauze, and treat as an open wound; thus allowing the placenta to come away in due course of time by suppuration. We can thus guard against sepsis by drainage and cleanse out the cavity as fast as putrescence develops. My most venerable friend and classmate at the University of Pennsylvania, Dr. Joseph Price, than whose experience in these cases there is none more extended and successful, and consequently deserves to be accepted as reliable authority, says: "All other lines of treatment that have been advocated fall into insignificance with this manner of managing these cases." He also claims this is a summer disease or accident, being in his experience almost always found only during the summer months; when May comes he looks for extra-uterine pregnancy cases.

The third brings us thoughtfully to consider the influences of those conditions which have been hitherto so grossly neglected, but which demand a decided and determined prophylaxis. The unprecedentedly rapid progress of civilization in disobedience to the law of Nature, as evidenced by the accumulation of wealth on one hand and extreme poverty on the other; the forcing or cramming system of intellectual education with lack of requisite physical training; the custom of unwholesome food and drink; deteriorating fashions of dress and habits of society; unbridled sensual indulgences; and the woful endeavor to equalize the duties of women with those of men, have within the last generation very much deteriorated the child-bearing capacity of civilized women. True, the standard of female beauty is increasing, and decided intellectual growth manifested by women in all departments of science and art; but, in the same ratio do we find the remote dangers as well as the immediate accidents of gestation and child-birth have increased. Hence, we find that flaccidity of the abdominal, spinal and pelvic supports; chronicity of the shattered exotic nervous systems; abnormal state of the ovaries; subinvolution of the uterus, etc., have marvelously increased in later years, notwithstanding the much-vaunted so-called hygienic advances in improved habits of living and reform in dress. These unnatural conditions are most prevalent among the residents of our cities, and increase from bad to worse as we go from the smaller to the larger and more crowded marts in civilization. They are as prolific sources of chloro-anemias, trophic-nerve paresis, hydremias, hyperemias, and prostrations during pregnancy among the women of wealth, ultra-refinement and excessive culture, as are those women who are subjected to the privations and hardships of extreme poverty. The remarkable fact in history being that there has been a proportionate increase of these conditions among the women of these two extremes of life, whereas the reverse holds good with women who belong to a middle class and are comparatively free from the unnatural behests of modern civilized society, or of irremediable poverty. The pregnant woman whose parentage, as well as herself, has been untrammeled with the deleterious impress of either of these two extremes in life, will terminate her gestation and parturition with much less suffering, and more healthful to herself and her offspring, than will her more unfortu-

nate sister who comes from a stock reared in the excesses of indolence, luxury or poverty. The pregnancies of too early, as well as of too late, marriages are alike to be apprehended as fraught with unnatural conditions. The girl who enters the matrimonial state at the nubile period, from 18 to 20 years of age, will approach the marriage couch with a much better prospect of wholesome fruition, healthy to herself and offspring, than will she who enters the nuptial relationship earlier, under the turbulence of puberty, immature physical development, and illy formulated morale, amid the storm-waves of exalted nerve tensions superinduced by over-taxed educational training, and undue stress of unwholesome fashion and society; or, than she who marries late, say after 28 years of age, who still retains all the productive elements but which have been debilitated by repeated disappointments, now leave her with the elasticity and resiliency of youth—the regulating factors in all growths—defective, and the newly stimulated energies of a life somewhat wasted are revived in a physical organism unfitted for the reproductive process. The ovaries and uterus may properly perform their respective normal functions from puberty to the menopause, but it must be remembered that an opportune impregnation is requisite to preserve woman, if not rosy and plump, at least elastic and buoyant; that her maternity may be exempt from pelvic indolence, so typically manifested by the flattened chest, the wrinkled face, and some fixed cultivated hobby—to save the rosy-cheeked maiden of 20 from shriveling into the parchment-skinned spinster of 40, by timely desuetude of celibacy. The primaparity or multiparity of the patient also demands its quota of consideration in the etiology of the diseases of pregnancy. The influences of heritage, personal habits, station in life and environments, usually make up the requisite field for the consideration in the primapara; whereas, in the multipara we find it essential to also look well after such conditions as the subinvolution of the uterus, lacerations of the cervix or perineum, tumors, and defective pelvic, abdominal and spinal support, as they often lead to abortion or to direct dangers during parturition.

The thoughtful obstetrician will, with inexorable discipline, advise his patient as to the requisite *régime*. The consciousness of his full duty will impel him to insist upon:

1. Absolute, regular hours and wholesome environment.

2. Plain but nutritious and wholesome food and drink, being principally composed of fresh lean meats, fresh fruits, pure milk, and distilled water.

3. A proper amount of exercise, by walking or light labor on foot and maintaining the correct erect posture. Whenever infirmity forbids such exercise, recourse should be had to massage, and as much time passed in the open air as is advisable under such unfortunate circumstances. Rest in the recumbent posture after meals and fatiguing efforts, with not less than ten hours sleep out of every twenty-four.

4. An open condition of the bowels and skin, which is to be chiefly maintained by proper diet, exercise and bathing, the wearing of flannels, warm low-heeled shoes and loose garments, and, in rare cases, the proper use of laxatives, and hot-water enemas.

It, however, not infrequently falls to our lot to have placed under our care pregnant women who belong to the poorer and less favored class, exposed to too much labor, privation of proper food, dress, and shelter; with whom we find ourselves confronted with the question for bettering their diet, dress and habitation, which assumes such proportions that demand our assistance, not only as medical men, but also as philanthropists. Fortunately the advantages which the many charities afford enable us to give this class much benefit in every way, save when mental anguish and nostalgia become irremediable factors, in the production of depressing influences which bar the healthful action of the resources at our command. With regard to repeated examinations of the urine and noting the temperature, it suffices to say that as are the urine and temperature so are, very largely, the prognosis and treatment prior to parturition. Urinalysis and thermometry are simple in detail, yet how prolific of averting the culmination of conditions very hazardous to both mother and child. Conditions which otherwise are frequently discovered only by the appearance of anasarca of the inferior extremities, edema of the face or lungs, or a seizure of eclampsia, after which attention

is given to these searching steps, but often too late to be of any value in devising a prophylaxis. This very naturally raises the question, Is there a prophylaxis for the albuminuria of parenchymatous nephritis during pregnancy and consequently the avoidance of eclampsia prior to or during parturition? The experience of an earnest rational endeavor in a limited number of cases warrants the opinion that very much may be done in this direction. So, also, with regard to the prophylaxis of parturial sepsis, which is a problem of equally great magnitude. True, sporadic cases of so-called puerperal fever (parturial sepsis) as well as of eclampsia, etc., ensue in spite of all possible efforts, but it is the writer's firm conviction that these murderous complications can and will be prevented by timely precaution and by banishing every factor in their production. Preparatory hygienic regulations, antisepsis and quarantining will as surely save the mothers from these complications as absolute cleanliness at parturition will save the child from ophthalmia neonatorum.

In proof of this, it is needless to confine reference to personal experience in private practice, for in addition we find the maternities likewise furnish abundant evidence in support of this declaration. Here we may cite, as the most striking example, the indefatigable labors of our eminent Fellow Dr. Joseph Price, in his connection with the Preston Retreat at Philadelphia, whereby both that institution and himself have become renowned, in establishing this fact beyond all doubt or cavil, that these complications can be prevented.

A word with regard to the term puerperal fever, which is misleading and fails to express the condition it is intended to imply. It should therefore be expunged from our literature and be replaced by the proper term, *parturial sepsis*. Parturial sepsis is a surgical sepsis, arising from the conditions in which women are found during the extrusion of the uterine contents, similar to those during surgical procedures. The same classes of septic infection and septic poisoning occur in the non-pregnant state, during operations upon the pelvic viscera done without due regard to absolute cleanliness, and in hospitals where patients are crowded together with want of proper sanitation. Facts, as numerous as can be collected in any department of medicine, prove conclusively that the infection and contagion of sepsis, non-specific and variable as they are, can be conveyed by the nurse or attendant as well as by the accoucheur, and thus may likewise poison patient after patient until they also, as well as the accoucheur, either discontinue their labors or subject themselves to the most rigid discipline of absolute cleanliness and sanitary environment. When this prophylaxis obtains, then will parturial blood poisoning cease to be among the cases intrusted to their care, and they will find themselves rewarded with a mortality of *nil* from sepsis. It is very clear to the writer that the more carefully we study and practice obstetrics on sound surgical principles, the better success will we obtain. This, above all else, will secure a thorough preparation of the vagina, that the child may make its exit into the world through a clean channel, which will insure safety to both mother and child. And again, if the forceps or the hand should be required, if laceration of the cervix or perineum should occur, the patient will then have the healthful benefit of the same preparation as is given for surgical procedure. A word also with regard to finding ourselves summoned during the latter period of pregnancy, or at the approach of parturition, to attend one who is suffering from or threatened with eclampsia, and the patient suffering chiefly from vascular excitement, I should feel it as much my duty to bleed, as I should to clean out the endometrium whenever parturial sepsis was found to be due to the retention of infected decomposing portions of the secundines. While, if the patient under like condition belonged to the more rare class of anemic cases, I should hope to happily correct the disorder by chloroformation, hot water, the hypodermatic use of morphin and atropin, veratrum viride, etc.

Under the fourth head of the subdivision of this subject, it may be remarked that pelvimetry is an equally essential requisite with urinalysis and thermometry. Deviations from the normal symmetrical pelvis, the diameters of the pelvic straits and the inclination of the bony excavation, exercise marked influences in proportion to the degree that they exist. In an abnormally broad capacious pelvis, with obliquity lessened and supports relaxed, we find that in the earlier period of gestation

the tendency is to misplacement of the gravid uterus, either forward or backward and downward, from gravitation in consequence of increased weight. These abnormal uterine positions are usually manifested early by bladder or rectal difficulties with bearing down or pressure in the pelvis, and a dragging sensation from the lumbo-sacral region, etc. The functions of the intra-pelvic nerves, blood vessels and lymphatics being interfered with, we find in a proportionate degree that there is produced a stasis in the venous, vaginal, uterine and rectal plexuses, and consequent dilation of both these vessels and the lymphatics. Thus we have produced a hyperemic state of the entire pelvic circulation resulting in edema primarily, followed by ecchymosa of the peri-vascular, peri-lymphatic, and other cellular tissues, to be succeeded later by varix of the vulval, vaginal, uterine and hemorrhoidal venus plexuses, and consequent trophic nerve changes. It is a noteworthy fact that in these cases there is almost invariably found a want of the correct erect posture. The woman, herself, unconsciously increases the aforesaid difficulties by assuming a more or less stooping posture, in her endeavor to make herself comfortable from the dragging sensation below. Thus we find the abdominal and spinal muscles relaxed, the lumbo-sacral spine receding behind its normal axis-perpendicular with ear, shoulder, hip and ankle—the weight of the superior trunk gravitation back of this normal axis and falling perpendicularly behind the heads of the femurs; whereby the pelvis is swung upon the femur heads from an oblique to a more or less transverse position, while the superincumbent weight of the abdominal and thoracic viscera, instead of being directed forward, by the normally advancing lumbo-sacral spine and supported upon the pubes and lower portion of the abdominal muscles, now falls directly within the basin of the pelvis, exerting its injurious effects upon the contents thereof. The real causes of these conditions being thus clearly revealed, the treatment becomes very simple. This consists in first reëstablishing and maintaining the correct erect posture, thereby securing the normal obliquity of the pelvis by advancing the lumbo-sacral spine in its normal axis of the body. The superincumbent weight of the abdominal and thoracic viscera is then again directed to normally gravitate upon the pubes and lower border of the abdominal muscles, and at the same time there is afforded the normal shelter to the pelvic contents below and behind the promontory of the sacrum. Experience has established the fact that the correct erect posture in these cases is secured and maintained the more effectually by virtue of proper external support. The external support which fulfills this purpose the better is one fully detailed by the writer in a paper read before the International Congress of Gynecology and Obstetrics, at Brussels, Belgium, September, 1892. (This support is manufactured by the Natural-Body Brace Company, Salina, Kan.) The normal equipoise of the superior trunk upon the lumbo-sacral spinal axis having been thus restored, whereby the evil influences from the weight adove as a prime causative factor in intra-pelvic disturbances are happily overcome, there remains but attention to be given to the insignificant weight of the misplaced pregnant womb itself. This is usually easily corrected, when free from adhesions, by proper posturing, and afterward maintained by proper internal support with some pessary suitably fitted to the case.

When, on the other hand, the pelvis is abnormally distorted or contracted, the question of how best to conduct the gravidity has been even a more unending source of discussion than the preceding condition. Here pelvimetry furnishes us the chief guidance. But before we progress further, let us first break loose from the traditional shackles of our predecessors and their authority, which have so long retarded freedom of thought to such a degree that he who dared to doubt met but derision. I refer chiefly to the murderous practice of inducing premature delivery and embryulcia in this condition. In the present light of science these procedures have no place in the obstetric art in connection with a viable fetus. They simply deserve to be mentioned that they may be the more effectually relegated to the past. This leaves us to choose principally between but two procedures whenever we find the pelvis so distorted or contracted that it precludes all probability to deliver the living child, namely, symphyseotomy and Cæsarean section. Without specifically considering all the points of this very serious condition—which,

fortunately for us, is, comparatively speaking, very rarely encountered in the native-born American women—I would unhesitatingly advise against the termination of gestation, looking more hopefully to ultimately saving the life of both mother and child by resorting to one of the aforesaid operations. It is to be remembered, however, that it is the duty of every intelligent obstetrician to become thoroughly familiarized with the indications as well as the technique of both these operations, neither of which is to be lightly undertaken by any one who does not possess the requisite skill, both in the obstetric art and abdominal surgery.

With regard to the proper selection of these two operations, I can do no better than quote Dr. Barton Cooke Hirst, of Philadelphia, in his address before the Washington Obstetrical and Gynecological Society, November 17, 1893, and published in the *Medical News* December 2, 1893: "It is obvious, therefore, that symphyseotomy can be preferred to Cæsarean section on the one ground alone—that it is less dangerous to the mother. A careful study of the results of symphyseotomy and of Cæsarean section will show that the latter is, at the very least, twice as dangerous to the mother as the former. The mortality of the infants is not quite so great in deliveries by Cæsarean section. Moreover, by Cæsarean section the child is sure to be delivered easily, no matter what the size and shape of the pelvic canal may be, and there is no necessity for that nice calculation in pelvimetry that is usually demanded before a contemplated symphyseotomy, a calculation in which even the best of us may err. With my own experience of three perfectly uncomplicated recoveries from symphyseotomy, I feel disposed to regard this operation with more favor than version and extraction in a markedly contracted pelvis. The opposite error of opening the symphysis when the pelvis is too small to permit of delivery by this means is more difficult to escape. It will only occur in a pelvis with a conjugate of sixty-seven millimeters, or under, a degree of contraction not often seen among us; and could we always be sure of the accuracy of our pelvic measurements, the mistake would pretty surely be avoided. I can imagine no more embarrassing predicament in obstetrics than a failure to extract the head after opening the symphysis. I should feel reluctant to operate again at the lowest limit for symphyseotomy unless I had the opportunity first to induce labor and artificially dilate the cervix some two or three weeks before term. In this case I should not hesitate to operate with a conjugate as low as sixty-five millimeters, and I believe delivery might be possible with a conjugate of only sixty millimeters. We may therefore be guided by the rule that at term, symphyseotomy is available only in cases where the conjugate measures over sixty-seven millimeters, while if the conjugate is found to be sixty-seven millimeters or under, the only recourse to be had is Cæsarean section."

The destruction of the embryo is, however, not only warranted, but becomes a requisite under certain circumstances or conditions; such as the presence of large fibroids in the body of the uterus, or large tumors involving both the ovary and uterus, also cancers of the uterus, and in certain cases, of placenta previa. Placenta previa is another abnormal condition deserving attention. It properly belongs to that class of appalling accidents in the lying-in room, as eclampsia, post-partum hemorrhage, rupture of the womb in uterine pregnancy or of the cyst in tubal pregnancy, etc., which allow but little time for action. Experience teaches that the proper use of forceps in these cases is to be preferred to the hand. The chief reason being that a narrow-bladed forceps can be introduced much earlier than the hand—requiring a dilation of only about one inch as compared with two and three-quarter inches for the hand—and, by grasping the head and bringing it down, tampon the placenta at once; whence time may be given sufficient to obtain full dilation and delivery with greatest possible safety to both mother and child. In these cases we may very properly follow the one line of action. As soon as the diagnosis of placenta previa is established our action must be prompt in evacuating the uterine contents. Hemorrhage is the danger signal. When this signal is given early, say prior to the sixth month, and the diagnosis established, we should proceed without any regard for the life of the child. When, however, this signal is given later, we should proceed as promptly, but with all possible endeavor to save the life of both mother and child. Whenever hemorrhage

takes place in these cases it is Nature's signal to us that there is great danger ahead; that the condition is so serious as to endanger, if not to take, the life of the mother at any moment. We cannot accept the situation only as serious, and must act promptly and effectually. The proper antiseptic precautions being observed with special reference to the vagina and the accoucheur's hand, the patient being placed under anesthesia, introducing first the index finger into the cervix, dilating gradually until two fingers are successfully introduced, and, when sufficiently dilated to admit of the forceps, pass the fingers through the body of the placenta, rupturing the membranes and place the forceps on the head, bringing it down and tampon the placenta at once. When, as sometimes happens, the dilation is greater and the presentation abnormal or less favorable, the accoucheur had better resort to the passing of his hand and turning by Braxton-Hicks' method and drawing the child into the cervix, and thus arresting the hemorrhage. The hemorrhage once checked, the subsequent delivery will be fully under control.

I have in this paper but sketched some of the salient and mooted points of the prophylaxis of the complications and needless sufferings of pregnancy, with no attempt at thoroughly elucidating or elaborating any one of them. Having no pet theory to promulgate and sustain at all hazards, no long list of cases and statistics with quotation and abstract from an exhaustive roll of writers has been made out.

CHRISTIAN SCIENCE AGAIN.

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If "Christian Science," the theme of Dr. Longsdorf's paper read at the recent State Medical Society and published in The Medical and Society Reporter of August 11th, were not a misnomer, it would long since have found ardent advocates among two very pronounced classes of the community, viz: professing christians and men of science, especially of medical science.

The purpose of the writer, however, is not to discuss the theories and claims of this so-called science and its votaries, but rather to appeal to members of our own profession to make more practical use of the one very important truth which forms the warp and woof of all the flimsy sophisms of Christian Science.

Dr. F. C. Herr (Medical and Surgical Reporter, September 8th) says, very pertinently, "I am quite sure that Dr. Longsdorf must have made a grave error when she says that, 'Christian Science must not be confounded with hypnotism, animal magnetism, faith or mind cure, spiritualism, clairvoyant or other trance or the old-time pow-wowing process.' If Christian Science is not these things, we have abundant reason for alarm, but it is the same old imposter in masquerade dress."

We well may relegate the thing itself to the domain of quackery, and assume towards those who claim to be healers under its provisions, the same attitude that the medical man always takes in the presence of pretension without foundation. He ignores and is indifferent.

Without any critical analysis of the basis upon which Christian Science, along with other allied subjects, rests, we cannot fail to see that the domination of mind over mind easily persuades to a belief in the domination of mind over matter. So far, the advocates of all such methods of healing are rational and scientific in their belief.

Certainly in these days of experimental physiological research, no well-read physician will dispute the fact that mind, or mentality—the volitional and automatic processes of cerebration—does to a great extent modify and control the ever varying conditions of the material man.

Foster (Physiology, Part III, Central Nervous System) says: "Consciousness, as we recognize it, seems to be necessarily operating as, or to be indissolubly asso-

ciated with the presence of, an incessantly repeated internal stimulus, and we cannot conceive of that failing to excite mechanisms of movement." If this be true, then given an influence to bear upon our patient sufficient to bring about that *incessantly repeated internal stimulus*, and what results may we not hope to accomplish.

It seems almost futile to mention illustrations along this line—they will readily recur to all. Pathological conditions most varied and remote are known to result from violent and sudden emotions of either fright or anger, grief or joy. Happiness is a fine cosmetic and is just as sure to promote health, as worriment and care are known to be prolific sources of that faulty metabolism which, sooner or later, results in disturbed function, and may result in almost any visceral lesion.

What are the various functional neuroses but the product of perverted nerve action? We repeat, mental states have produced diseased conditions almost innumerable, from the simplest vaso-motor disturbances familiar to all, as pallor and syncope, to even the more complex clinical picture of diabetic coma* from nervous shock. Dyspnœa, cough, emesis, the inhibition of reflex movements through a counter stimulus, menstruation influenced favorably or unfavorably, the salivary secretion induced or exaggerated by smell or sight of food, even pain ignored and therefore practically expelled by diverting the mind—these are but a few of the physical phenomena occurring in consequence of certain mental states. Apropos of this same truth is Professor Pontain's very interesting article on "Emotional Icterus," (MEDICAL AND SURGICAL REPORTER, September 15th), which, he asserts, "If primary, may be cured without drugs if the patient be in *a tranquil state of mind.*" If disease can be induced thus, it certainly behooves the physician to endeavor to find a way to reverse the process, that he may substitute harmony for discord and ease for disease.

Referring to the many undoubted cures wrought by these would-be scientists—Christian or otherwise, Dr. Longsdorf says truly, "To a rational thinker there is no mystery about the process," but we think she errs in assuming that "it can not be rationally explained so that the subject of it can clearly understand."

That is one of the strongholds of these occult methods—those who practice them trade upon the gullibility of the weak in body and mind. Whereas the regular physician may use not only all the resources of his medical art, but should also use all the powers of his trained mind to dominate the mind of his patient and teach him how to use his own will towards the betterment of his physical condition.

The successful practitioner knows that he owes his success to something more than his efficacious prescriptions; just how large a factor is his personality and the power he possesses to win the confidence of and to control his patient, he may not be able to determine, but he certainly is conscious of it.

Kant has said, "In our moral consciousness we find ourselves under a law which calls upon us to act as beings who are absolutely self-determined or free, and which therefore assures us that our intelligent self is our real self."

Let the wise physician demand that his patient *be* his intelligent self, and act accordingly. Let him seek to arouse the moral consciousness of his patient to a sense of his own inherent power. Let him endeavor at least to induce that tranquil state of mind which certainly assists not only nature but the doctor to work marvellous cures. It may not be quite so easy as to prescribe pills and potions, but this moral consciousness once aroused will become a mighty adjutant to the proper physiological action of whatever therapeutic measures may be instituted. It is like Aristotle's fulcrum, "A fixed point on which reason can set its lever as a secure basis from which to move the human will even against the opposition of all the powers of nature." The neurologist understands this truth and makes use of it. Why should not the general practitioner do the same in selected cases? Where the nervous element is a factor in initiating a diseased condition or in the continuance of it, there is a field and a large one for mental therapeutics.

*Philadelphia Polyclinic, September 15th.

For Whooping Cough.

℞

Sulphonal	gr. j
Creasoti	mij
Syrupi tolutani	
Aquae	āā ʒij

Misce et fiat mistura.
Two teaspoonfuls to be given every two hours.

—Western Medical Reporter

COMMUNICATIONS.

TREATMENT OF ANAL FISTULA.*

J. McFADDEN GASTON, M. D., Atlanta, Ga.

PART I.

For a proper understanding of the principles underlying the management of anal fistula, it is requisite to present some data connected with the rectum.

Morton and Witherill state that the rectum in its upper and middle portion is derived from the internal and middle layers of the blastodermic membrane, while its lower third with the anus, like the buccal cavity, is formed by the external and middle layers. The rectal veins like the rectal arteries are divided into three sets: superior, middle and inferior. They form two distinct venous systems, the rectal emptying into the portal system, and the anal terminating in the internal iliac.

The throat and rectum have many points of correspondence in their structure, being supplied with circular fibers, which make them the counterparts of each other, by opening and closing their respective orifices. There are two sets of muscular fibers encircling the lower part of the rectum, known as the outer and inner sphincter, by which it is automatically closed except when dilated voluntarily for the release of flatus or the discharge of fecal matter. There is also another distribution of circular contractile muscular fibers at the upper limit of the rectum, which constitutes the division between it and the sigmoid flexure of the colon. This may be appropriately designated the recto-colic sphincter, and forms an effective barrier ordinarily to the descent of the excrement into the rectum. This annular muscle has not received from anatomists or physiologists the consideration which its rôle in the intestinal functions warrants. It is a veritable constriction from muscular contraction by which the colon is normally closed against the descent of the fecal mass into the rectum. When the excrementitious matter reaches the sigmoid flexure of the colon it is deprived of all the nutritious properties and after this desiccated mass passes the muscular division between the colon and rectum, and is deposited in the lower reservoir it contains only effete matters.

The fecal deposit acts then as a foreign body, and stimulates this canal to expel the débris by the anal orifice, or by remaining there becomes a source of trouble and even of disease. If the indurated mass remains in the rectum for an undue period, it induces more or less local disturbance and extends an etherism to the general system, through the nerve supply to this portion of the organism.

The rectum is a pouch or depository consisting of contractile tissue and capable of great distension under the accumulation of the fecal matter within it. While its proper function is that of a temporary reservoir with the property of contraction for the expulsion of its contents, it may fail to perform the office of a waste pipe and become shut off as it were by sphincters above and below. These annular muscles are provided with somewhat similar means of opening and closing at each extremity of the rectal canal; and being composed of tissues in their walls, which are alike subject to induration and thickening, with constriction of the passage.

Zeigler qualifies proctitis as an inflammation of the rectum, resembling in many points inflammation of the vermiform appendix. The exciting agents are frequently foreign matters and stagnating feces; but disturbance of the circulation in the hemorrhoidal veins may likewise end by inducing inflammatory change in the bowel.

When the inflammation and ulceration extend deeply into the tissues of the wall of the bowel, the surrounding connective tissue becomes infiltrated and hypoplastic or breaks down into abscesses containing fetid pus.

Thus it occurs that the rectum becomes a seat of disease and among its disorders fistulæ are not uncommon, either as sequelæ of peri-rectal abscesses or resulting from abrasions and ulceration of the inner coat.

*Read by title before the Section on Surgery, American Medical Association, 1894.

Apart from fecal concretions and enteroliths lodged in the rectum and becoming sources of irritation and inflammation to its mucous coat, there are foreign bodies which pass through the alimentary canal and find their way into the rectum to cause trouble in the surrounding structures. Fish bones, spiculæ of chicken bones and other bony fragments have frequently been found in peri-rectal abscesses after having perforated the rectal wall. Very recently I removed a spicula of bone over an inch in length which had become lodged just within the external sphincter, and one extremity had perforated into the mucous membrane of the rectum. This would have ultimately effected an opening through which the fecal matter could have penetrated the tissues and set up a suppurative process. The incautious introduction of a syringe pipe or other solid substances may also induce abrasions of the mucous membrane of the rectum which will terminate in ulceration and perforation of the rectal wall.

The attempt to remove hardened fecal matter with a scoop or with the fingers may lead to a bad result. But there are scores of disorders from injuries inflicted in the parts immediately around the anus, which set up inflammation of the deeper seated structure. Violence of any kind, by a kick, sitting down upon a projection, or being thrown upon the pommel of a saddle, may lead to a peri-rectal abscess, which calls for considerable skill in its treatment to avert its termination in a fistulous outlet. The early recognition of such a purulent collection and its discharge by a free incision, with the subsequent use of a drainage tube and light tamponage with antiseptic gauze, is usually attended with a radical cure of such traumatic abscesses. But there will occur cases which will resist treatment or which fail to be properly managed, that result in fistula.

There is a class of tuberculous abscesses in the peri-rectal tissues which are of strumous origin, and independent of any mechanical injury, that are accompanied by fistula of the most aggravated type. This form calls for constitutional as well as local treatment.

It is not a legitimate inference that the drain of a fistula upon the adjacent rectal structures has a salutary influence upon tubercular diseases of the lungs. The evidence is conclusive to my mind that the general debility and constitutional irritability, resulting from the constant wear and tear of fistulæ involving the tissues around the anus, are in most cases aggravating circumstances in the progress of other diseases, and the more effectually they can be cured the better the result. There was a period when the names of distinguished members of the medical profession were arrayed against operating for fistula in ano when it occurred in a tubercular subject. But the weight of authority is now favorable to operative interference for eliminating the local disorder and arresting the drain upon the system.

Instead of the chronic cure by a slow treatment for fistula in ano, with oft-repeated temporizing applications, in subjects of tubercular disease, it is decidedly preferable to secure the prompt effect of a speedy and radical operation in cutting short the evil.

The openings may occur at distances from the anus, varying greatly, both internally and externally. Where there is a sulcus forming a semi-circle around the lower portion of the rectum, it is recognized as a horseshoe fistula, and may have the opening in the skin on the opposite side from that in the wall of the bowel.

The usual division of complete and incomplete is based upon the existence of an external and internal opening in the former, and either one or the other in the latter. Those having but one opening are known as blind fistulas and we may have a blind external or a blind internal fistula, as the opening occurs in the skin outside of the anus, or in the mucous coat within the anus.

The cases in which the two openings in close proximity to the anus are presented, usually involve only the external sphincter, and have the internal orifice between this and the internal sphincter in the depression which exists in the space between the two muscles. This is accounted for by Allingham in the following manner: "The abscess forming, in most cases just outside of the anus, does not burrow deeply but passes close under the external sphincter; it then is prevented from ascending higher up the bowel by the thick band of the internal sphincter, and consequently is turned inward and makes its way through the lax areolar tissue." This explains those cases in which the primary

abscess is outside of the rectum; but a large proportion of fistulas have their origin inside, and by perforation of the rectal wall admit the fecal matter which works its way by suppuration out through the skin beyond the border of the anus, forming a complete fistula.

When the abscess commences in the ischio-rectal fossa it burrows deeply, according to Allingham, and then most usually passes beneath the internal sphincter and opens, if at all, high up in the rectum. There may be more than one aperture in the rectal wall communicating with the different fistulous tracts, leading out through the skin at varying distances from the anus. When the openings occur high up in the wall of the rectum, and the suppurating process extends from these into the surrounding tissue of the buttock, several external orifices may be found in the skin of the hip, even at a distance of six or eight inches from the anus. Comparatively few of these cases have been noted in this country, but quite a number of them came under my observation during my sojourn in South America. Some of these extensive fistulas will be referred to in connection with the surgical measures adopted for their relief.

The foregoing pathologic indications have not included a distinct recognition of what constitutes a fistula, and it may be defined as the ulcerated outlet of a suppurating tract through the subcutaneous tissues. This irregular and often tortuous channel is surrounded by a pyogenic membrane, bounded by a fibrinous deposit, which imparts a sense of induration to the touch by palpation. The object of treatment in any form should be the obliteration of this canal and the apertures connected with it, whether internal or external.

PART II.

As a preliminary step toward any measure of treatment for fistula in ano, whatever may be its form, it would be desirable to have the bowels frequently evacuated for two successive days, and to use an enema of warm soap water during the morning of the day fixed for an operation. After this procedure the patient should be placed upon the side, with the hips projecting over the edge of the bed so that the fistulous opening shall be uppermost, and a speculum introduced into the rectum with a view to open moderately the anus. A syringe with a small beak may now be employed to pass a 50 per cent. solution of the peroxid of hydrogen from the external aperture through the fistulous canal and out at the inner aperture, leaving it to escape through the dilated anus. This should be followed with an injection into the fistula of a mixture of one drachm of the concentrated Lugol's solution with four ounces of warm water, letting it escape by the anus, as in using the other wash. Lastly a stream of sterilized warm water should be passed through the fistulous tract and the patient is ready for whatever operation may be indicated.

Various processes have been employed for the cure of anal fistulæ, some of which look to the correction of the conditions involving the use of injections into the tract, while others by mechanical devices procure its obliteration, and again the more radical measure of a cutting operation is held to be the most effective treatment. It is evident that different modes of procedure are requisite, according to the nature of the case, and that which is applicable to the superficial complete anal fistula cannot be adopted in the deep-seated anal fistula with one or more apertures in the bowel communicating by fistulous tracts with several outlets in the skin at varying distances from the anus.

When there is an external orifice within an inch or less of the margin of the anus, and an internal opening within an inch or less of the aperture of the anus, the knife may be safely employed. A grooved director being introduced at the external opening is carried gently along the tract of the fistula until it emerges from the internal opening into the lumen of the bowel, when the index finger of the left hand is passed into the anus and up to the end of the director.

If from any cause the director is not found protruding, it should be guided by the finger into the aperture, or if not found, the end of the director may be forced through the thinnest part of the intestinal wall; and then passing the end of the finger beyond the point of the director it should be brought outside. The tissues lying between the external and internal openings of the fistule are now resting over the director and entirely exposed to the view of the operator. At this point

I have found a departure from the custom of using a curved bistoury to give satisfactory results, and would advise the broad straight bistoury to be placed with its back in the groove of the director and thrust through this intervening structure, which includes the external sphincter muscle. If the fistulous tract is not located at the right angle to the border of the sphincter, the director should be forced into a position to make the cut transverse to the fibers of the sphincter muscle.

The next step is scraping out or curetting thoroughly the fistulous tract so as to remove the pyogenic membrane, and thus place the bottom of the wound in a favorable condition for the process of granulation. Packing the line of the fistula from the external to the internal opening with iodoform gauze, and filling up the incision with loose gauze over this, a compress may be secured with a T-bandage to keep the dressing in position.

There is usually so much sero-sanguinolent oozing after this operation as to soak the dressing and require redressing within twenty-four hours. When fresh dressing with iodoform gauze is thus applied, no further change is requisite for three days. Unless a movement of the bowels should take place there can be no object in removing the dressing, but if a fecal evacuation occurs, the parts should be thoroughly washed with carbolized water from a syringe, and the dressing re-applied as previously. So soon as the bottom of the incision along the fistulous tract is found to be studded with granulations, the packings should be discontinued and the sides of the wound brought in contact to secure union of granulation in all parts.

The practice of former times, in keeping the sides of the incision separated by lint or gauze until the wound fills up with granulations from the bottom, is a fruitful source of protracted suffering to the patient and conducive to that loathsome result of inability to retain the feces and intestinal gases. If the curetting is done efficiently at the outset and the packing applied properly in the bottom of the wound for one week, the granulating process ought to be so developed in this time as to warrant the closure of the incision. By the use of firm compresses on either side, held in place by strips of adhesive plaster or bandages, an operation of this kind should not require the attention of the surgeon more than two weeks. The union secured in this way between the divided parts of the sphincter obviates all inconvenience afterwards from fecal incontinence.

The attempt to dissect out the tract, when a fistula is laid open, has not been attended with results which encourage the immediate closure of the incision after an operation and hence need not be dwelt upon here.

In regard to those cases in which the internal opening of the fistula is found above the internal sphincter, but within two inches of the anal orifice, while the external opening is something over an inch from the margin of the anus, the knife may still be employed with safety. But in view of the difficulty or even impracticability of turning the point of a grooved director out at the anus, the process may be modified by introducing a concavo-convex wooden guard into the rectum to receive and support the point of the director when it emerges from the internal opening of the fistula.

An assistant should hold the director firmly while the operator secures the guard and makes the incision with the broad straight bistoury, by thrusting it along the groove of the director until the guard is is reached and then cutting inward so as to divide all the intervening tissues. The subsequent management of the case corresponds very much to that above described, except that the packing must be carried higher up into the rectum to reach the end of the incision.

In this class of cases the elastic ligature has been employed with satisfactory results by some operators. It certainly has at least the recommendation of lessening the liability to hemorrhage which attends a cutting operation that extends above the internal sphincter. There is a decided advantage in using the elastic ligature instead of silk or other material which only cuts through a limited portion of the inclosed tisssue, as the latter must be tightened from time to time, whereas the former continues the constriction until all the tissue is divided. In either case, however, there must be considerable delay in the process of cutting through the structures involved, and there is suppuration continuously, not only along the original fistulous tract, but from the entire surface

left behind the ligature as it cuts its way out. Under these unfavorable conditions it is very desirable to adopt another procedure which may accomplish the end in view more expeditiously, without hemorrhage and without suppuration. All these requirements are fullfilled completely by employing the chain ecraseur. This is suited not alone to the fistulæ having an external and an internal opening within an inch to two inches from the anus, but to those opening high up in the rectum and at a distance of several inches outside of the anus, through one or a number of apertures in the skin of the buttock. Having treated some cases of deep-seated extensive fistula in ano by this process during my sojourn in South America, which were reported in the *American Journal of Medical Sciences*, of July, 1881, I will present a few of the points recorded in that paper, to which members are referred:

If the source of the fistula is high up in the rectum, the route of the discharge may be in the direction of the sacrum or through the muscular fibers of the gluteus, and there may be several lines of communication with the surface. When the tract penetrates to such a depth as to cause apprehension of hemorrhage by cutting with a knife, the tissues may be divided without any risk by the chain of the ecraseur of Chassaignac. The essential conditions which indicated this operation have been observed in four cases of extensive fistula in ano.

The internal opening in each case was high up in the rectum, and the fistula extended from this aperture deeply into the surrounding tissues, so that the line of communication between the internal orifice and the external outlet of these fistulæ exceeded six inches in length, involving the structures on a large scale.

As the space allowed for this paper does not admit of details and the record of the treatment with two chains at the same time is given in the report of the last case, it may be quoted verbatim from the journal. Chloroform anesthesia was used in all cases: "Case 4, had two deep fistulas, whose external outlets were nearly equal—distant from the junction of the sacrum and coccyx on either side, having each a communication with an opening about midway up the rectum. The channels being tortuous could not be traversed by a metallic probe or director, yet they were explored by a flexible bougie, to which the chain of the ecraseur was attached, and thus loops were thrown around the intervening parts. Two instruments were used so as to encircle the tissues on either side and divide them at the same time. As the chains included a portion of the buttock containing no vessels that could yield any amount of blood, the tightening was done rather too fast, and as a consequence there was some sanguineous oozing from the divided surfaces of the muscles. This, however, ceased upon the application of a strong aqueous solution of phenic acid, which has proved in my hands an effective hemostatic, even when small arterial twigs are divided by the knife.

"The usual dressing of fine strips of old linen saturated with carbolized oil was kept up for some weeks, and the cure was completed within two months, so that the negress went about her duties on the farm."

The most remarkable feature in connection with these extensive divisions of the deep-seated fistulas, involving the cellular tissue with the muscular fibers surrounding the rectum, is the comparatively slight effect produced upon the general system. There has been little febrile excitements and the restorative process has progressed satisfactorily after all these heroic operations.

Borax as an Aid to the Digestion of Milk.

Germaine Sée has recently announced the clinical fact that borax used internally is a valuable aid to the digestion of milk. He discards the use of carminatives, charcoal and other intestinal antiseptics, claiming that they injure the mucous membrane of the intestines. He employs laxatives—hydrastis canadensis, castor oil, and olive oil in large doses, or oil enemeta. Prof. Sée holds that in many cases of indigestion the stomach is erroneously treated when the real cause of the disease is the intestines, which are often the seat of membranous enteritis resulting from constipation, and giving rise to glary, mucilaginous, cylindrical masses of mucus, with pain and swelling over the region of the colon. These symptoms easily distinguished the cases referred to from ordinary constipation, in which there may be easily seen masses of filamentous or vermicelli-like mucus.—*Modern Medicine.*

LUBRICATING CATHETERS.

L. D. MORSE, M. D., San Mateo, Cal.

In the number of the Medical and Surgical Reporter for May 19th, Dr. J. M. Kitchen is quoted as recommending castor oil as an excellent material for lubricating catheters. I have seen, at different times, the same recommendation by other physicians.

I differ most seriously from this opinion. I do not believe that castor oil is non-irritating. If so, why does it act as a cathartic? I have seen a good deal of of irritation caused by using it to clean foul sheath in horses. It is excellent to oil buggy axles. It has an unpleasant odor. It is tenacious truly, and according to Dr. Kitchen, "should always be applied warm." Who, that is obliged to use a catheter three or four times a day, often away from home, would like to be bothered with warming nasty castor oil every time he had to urinate? And wherefore? It is absurd.

I am in the middle of my 73d year. For the past four years, in consequence of an enlarged prostate gland, I have had to use a catheter, and cannot urinate without it.

I use exclusively the soft, rubber catheter. For a lubricant I use California olive oil—*pure*. I am safe in saying that all imported olive oil is adulterated with cotton seed oil to the extent of at least two-thirds. This has been proven. In California we have a law that forbids any one, under penalty, from selling under the name of California olive oil, anything but the pure article. One concern, at least, has been forced to change their label to "salad oil."

To an ounce of olive oil I add twenty to twenty-five drops of eucalyptus oil, as an antiseptic. The catheter, after using, is rinsed out in Zymocide or Listerine, and is most of the time left in a bottle containing one or the other of these antiseptics. The utmost cleanliness as well as antisepsis, is required to prevent a urinary odor which will lead to inflammation. I have learned by bitter experience what I probably would not have learned otherwise.

I may add that I have found pure olive oil very useful for partial or general inunction, more especially in the eruptive fevers, and, I think, is much preferable to any seed oil. It may be medicated according to circumstances. I often use eucalyptus oil, and sometimes carbolic acid in the desquamation of scarlatina.

TRANSLATIONS.

THERAPEUTICAL SUGGESTIONS FROM FOREIGN JOURNALS.*

A CASE OF SEVERE DIABETES CURED BY OPIUM IN LARGE DOSES.

Dr. K. Bohland (*La Semaine Médicale* No. 48, 1894) reports the case of a man of fifty-nine years, of alcoholic parents who, very weak and emaciated in spite of an antidiabetic diet, passed during twenty-four hours three to four litres of urine, containing 100-200 grams of sugar, but without trace of albumen, acetone or diacetic acid. His appetite was decreased and his skin dry; the internal organs were apparently normal. Antipyrine and other antidiabetic remedies were of no avail; a sojourn at Neuenahr only caused an aggravation. He then began to suffer from insomnia and bilateral sciatica, while his emaciation increased still more. Bohland then prescribed him laudanum (Sydenham's), fifteen drops, three times a day. As the pains were intense, the patient rapidly increased the dose to two to three hundred drops a day; at the same he maintained a strict antidiabetic diet. Under the influence of this treatment the sugar commenced to diminish, little by little, so that at the end of a few months, it had completely disappeared. At this

*In charge of the Translator, F. H. Pritchard, A. M., M. D.

period he presented the characteristic signs of chronic morphine poisoning; his pupils were contracted, he complained of trembling, weakness of memory and considerable general debility. Nevertheless he continued to take the drug, in teaspoonful doses. The urine was passed in normal quantity and contained neither albumen nor sugar, though he partook of a mixed diet in abundance. The glycosuria did not then return even when he took one hundred grams of sugar, in his food. Externally, there was nothing abnormal to be seen; no signs of arterio-sclerosis. The patient was gradually weaned from the drug and, at present, he enjoys good health and is able to work. He has gained forty-two kilograms in weight; his appetite is excellent and his urine never contains the least trace of sugar, but he has developed a cataract in each eye.

TREATMENT OF DIPHTHERIA.

Dr. Brasch (*Muenchener Med. Wochenschrift* No. 18, 1894) has employed, at various times, different methods in the treatment of diphtheria. Since 1889 he uses the following measures. In patients over twelve years of age, where they are able to gargle every hour or two, they are allowed to use with the following:

℞

Corrosive Sublimate	.0	1	(grs. jss)
Chlorate Soda	.2	0	(grs xxx)
Distilled Water	200-300	0	(℥vjss-ixss)

Antipyrine or the salicylate of soda may be given for the fever, the latter with addition of pilocarpine (0.001-0.005) once to twice a day, as the membranes dissolve more or less rapidly. In grave cases and in small children, he recommends the cyanide of mercury, internally, from the very beginning of the disease and in the following form:

℞

Cyanide mercury	.0	1	(grs. jss)
Distilled water	.250	0	(℥viij)
Simple syrup	.50	0	(℥jss)
Tr. Aconite	1.0-2	0	(gtts. xv-xxx)

A small teaspoonful every half-hour, hour or two hours, in a glass or an earthenware cup, but not from a metallic spoon, according to the severity of the case. For a quarter of an hour after its administration neither food nor drink should be given. Give the remedy day and night.

TO DISGUISE THE URINOUS ODOR IN INCONTINENCE OF URINE.

Dr. Brassert (*La Semaine Médicale*, No. 48, 1894) has taked advantage of the fact that patients under the influence of essence of turpentine excrete a urine smelling strongly of violets, in treating cases of incontinence, etc., where an insupportable odor is given off by such patients. Ten drops of rectified essence of turpentine three times a day, suffice to cause the nauseating odor to disappear and to be replaced by an odor of violets, to the great satisfaction of those about the patient. It may be administered in a little water or milk. It has been used for a long time at Prof. Emminghaus's psychiatrical clinic in Freiburg. It may be continued for several weeks without inconvenience, and is only contra-indicated in ulcer of the stomach, gastric catarrh, nephritis or where it causes dyspepsia or other morbid disturbances. This is a precious measure in private practice where it is difficult to keep such a patient clean from lack of proper care. Another deodorizer which is also used at this same institution, especially in those patients whose cutaneous secretions are fetid, is to give a daily bath to which has been added three or four grams. of permanganate of potash. This has no injurious effect upon the general health of the patient, and rapidly causes the disagreeable odor to disappear.

HYOSCIN IN HYSTERO-EPILEPSY

Dr. Bela Nagy (*Pester Med.-Chirurgische Presse*, No. 8-9, 1894) from an employment of hyoscin in five cases of hystero-epilepsy, comes to the following conclusions:

1. Hyoscin will abort an incipient attack and suppress one which has developed.
2. In most cases it produces sleep.
3. Its action will follow in five to twenty minutes.
4. One milligram is on an average, sufficient.
5. No important disagreeable symptoms were observed after such doses.
6. If employed for some time there is no accustomation to its action.

TREATMENT OF ACCIDENTS FROM ELECTRIC CURRENTS OF GREAT INTENSITY.

Dr. D'Arsonval (*Deutsche Medizenal-Zeitung*, No. 63, 1894) reports a case of shock from an electric current of great intensity, such as is used for illumination. Experiments on animals have demon-

strated that such cases may be saved i artificial respiration be applied at once even though the current be very strong. The condition in question is asphyxia and syncope, states where something can be done. The criminals which have been electrocuted in America, he claims were only apparently dead for they received only 1500 volts; in his experiments he employed one of 2500 volts. He accidentally had an opportunity to test the value of his deductions. On an electric railroad a current of five hundred volts was used with one hundred and ten interruptions (800 milliampères). A workman unconsciously placed himself into the circuit and received the full strength of the current. For five minutes he was exposed before it could be cut off. It was forty minutes before medical aid arrived. Though he was thought to be certainly dead, artificial respiration was begun and later rhythmic tractions of the tongue attempted—Laborde's method. Respiration gradually recommenced; he was transferred to a hospital where he returned to consciousness and is now under treatment for the burns. Another workman who came to the unfortunate man's aid also received a shock but without serious injury. The former was an epileptic.

USE AND MISUSE OF BICARBONATE OF SODA.

Dr. Rosenbach (*Centralblatt f. d. Medicinischen Wisssenschaften*, No. 30, 1894), claims that the bicarbonate of soda is prescribed by far too often to neutralize excess of acid in the stomach. It is, except in extreme cases, difficult to determine whether the excess of acid is abnormal. To determine whether the excess of acid is the real cause of stomachic disturbances, a careful consideration of the patient's occupation, his general condition, feces, nutrition, the consistence of the stool, etc., are necessary. In too rapid eating there is prone to be a faulty relation of motor functionability and production of acid. Formation of organic acids—fatty or lactic acid—may be a cause. Thirdly and most frequently, the dyspepsia is due to pure hyperesthesia of the organ. On account of its sedative action the bicarbonate is often misused and in too large doses; not more than a good sized pinch should be taken at one time. Frequently a piece of dry bread or biscuit will suffice to absorb the excessive acid.

TREATMENT OF HEMATOPORPHYNURIA.

Dr. F. Mueller (*Wiener Klinische Wochenschrift* No. 14, 1894,) had under observation a grave case of hystero-neurasthenia, in a woman who, for five months, took a gram of sulfonal every day, on account of sleeplessness. At the end of this time shé commenced to pass a dark brown urine containing hematoporphyrine while her strength and mental powers began to deteriorate rapidly; her pulse was filiform. The hemameter showed that the hemoglobin of the blood had sunken to less than half of the normal quantity. At the same time there was obstinate constipation and scanty urine. The hypnotic was discontinued without result, but a daily dose of five to eight grams of the bicarbonate made a decided improvement. This latter drug was given on account of the great acidity of the urine and the corresponding decreased alkalescence of the blood. Three weeks later the bicarbonate was discontinued for a time, but the hemotoporphynuria reappeared in four days. Given again, the acidity of the urine disappeared, the hemoglobin became normal and after its use for several months the neurasthenia was greatly improved. Also, in a second case, tabes dorsalis, where hematoporphynuria was caused by sulfonal, alkaline treatment caused this symptom to disappear. The patient had taken from one-half to one gram of the drug per diem, for two months.

Dr. E. Schultze, (*Deutsche Medicinische Wochenschrift*, No. 7, 1894), also has observed hematoporphynuria in a case of melancholia in a woman with obstinate constipation, after the use of trional, in a daily dose of one-half to one and a half grams, for four weeks. The urine was of a dirty reddish brown color. Chemical and spectroscopic examination revealed hematoporphyrine to be present. A few days later death followed, with symptoms of rapid dissolution. The small dose compared with that of sulfonal, is worthy of note. Trional is offered as a substitute for sulfonal.

PAIN AFTER EXTRACTION OF A TOOTH.

In the *Revista Medico-Quirurgica Americana*, July, 1894, the following mixture

is recommended in pain after extraction of teeth:

℞ Morphine..... o | 30 (grs. ivss.)
Tr. Aconite..... .....
Chloroform.....
Alcohol ää.....30 | o (ʒj.)

This formula is especially valuable when the pain continues for several days, as it is sometimes liable to do. Apply locally on a ball of cotton. A mixture of equal parts of chloroform and tincture of aconite, or one containing one part of camphor dissolved in two of chloroform is also praised, in the same condition.

A CASE OF MELANOMA CURED BY ARSENIC INTERNALLY.

Prof. Lassar (*Deutsche Medizinal-Zeitung*, No. 64, 1894), recently presented before the Medical Society of Berlin, a case of malignant melanoma in a woman where a definite cure was obtained by the internal use of arsenic. A nodule had developed beneath the nipple and which was probably due to pressure by one of her corset stays. The little growth had been cauterized, but it returned in a few weeks and grew to the size of a cherry. Any further operative interference, even excision of a piece for histological examination being refused, Fowler's solution was administered in a dose of five drops, three times a day, after meals. The growth commenced to decrease in size and to shrivel up from the very first week. The remedy was discontinued, at times, but the tumor ceased to decrease and even showed tendency to progress until, finally, this year she completed the treatment with an entire disappearance of the tumor. Two months have elapsed since then and no signs of a return have been remarked. He claims that by the early internal administration of arsenic, it is possible to bring a favorable influence to bear on such heteroplastic growths. On account of the great malignancy of melanomata, the ease with which they recur and their rapid generalization, they are among the most feared of cancerous new growths. He claims that no case is known in the literature that has been cured, without an operation. Their general tendency is to progress to a fatal termination even though they remain quiescent for a time. In the case reported, a benign nævus increased in size during the "course" of treatment.

HORDEOLUM.†

Ripault (*Gaz. Med. de Paris*, June 30) remarks that Hordeolum, that small furuncle which springs from the base of the lashes, seems scarcely worthy at first view of a moment's attention; nevertheless, as it gives rise at times to grave errors of diagnosis it is worth while to study its nature and characteristics.

Etiology.—A stye may appear abruptly in a subject whose lids and conjunctivæ are quite healthy; it then comes from a purely accidental inoculation, and has every chance to remain isolated. Ordinarily it is found in lids that are more or less diseased. The patient is suffering from an acute blepharitis, or one that is becoming chronic; the palpebral borders are red, excoriated, thickened, the seat of intense itching; the lashes are agglutinated, or have fallen away in places; superficial at first, the infection increases in depth towards the glandular zone. In certain cases lesions of the glands of Meibomms may be noted; small yellowish tracks appear on the conjunctivæ, clearly inflamed in their central points. Finally this furuncular blepharitis which especially limits itself to the lower lid, will be associated with lachrymal conjunctivitis so often unrecognized, but described by Galezowski in particular.

Stye is most common in eyes affected with conjunctivitis, or with strumous kerato-conjunctivitis; children are more readily exposed to it when they have contracted the bad habit of rubbing energetically the lids night and morning, or during the day to relieve the itching. Vices of refraction also occasion it; it may also be produced by the clasp of glasses, the use of magnifying lens, the use of the microscope and by rubbing. Certain professions peculiarly expose the patient to the disease on account of the occular irri-

† Translated for THE MEDICAL AND SURGICAL REPORTER, by W. A. N. Dorland, M. D.

tation produced; the dust of mills, of grain, of charcoal, may readily produce a stye. Women and young girls may be affected with it at each menstrual period; sexual infection is an undoubted source of the disease. Finally the furuncular diathesis is essential to the production of stye.

Pathologic Anatomy.—This is based entirely upon that of any furuncle, and presents nothing of special interest.

Symptoms: Its onset is always abrupt, with more or less intense itching, with finally a slight pain like the pricking of a pin. There then appears on the free margin of the lid, a small red point which becomes pronounced and shows a tendency to spread. Winking movements are very disagreeable and are rendered more difficult; if the small, inflamed surface be touched, one provokes an acute pain against which the patient involuntarily defends himself. Usually at the end of three or four days, there is experienced a severe tension accompanied by slight paroxysmal lancinating pains indicative of suppuration; the tumor increases in size and at its summit may be noted a characteristic small yellow spot; when this is discharged the tumor quickly disappears and cicatrization is rapidly accomplished. The general phenomena are slight or absent; at times there will be some malaise and anorexia; there is no true fever. The stye may be single and absolutely ephemeral, but this is not the rule. Ordinarily there will be found two or even several in different stages of development upon one or both lids. Often there will be an uninterrupted series of these furuncles tormenting the patient during weeks or months; these relapses constitute the principle discomfort to the affection. The *diagnosis* is plain.

The *Treatment* consists in applications of repeated antiseptic compresses; then as soon as pus has formed, an incision should be made with a small bistoury; a slight digital compression will aid in the discharge of the matter. To prevent the return of the disease, antiseptic pomades may be used each night, such as vaseline 5 grams and yellow oxid of mercury 5 centigrams; tepid lotions, morning and night, with saturated boric water are of service. The preventive treatment will be based upon the diagnostic etiology; the general state must not be neglected; local and general prophylaxis is essential.

BACTERIOLOGICAL NOTES.

CULTIVATION OF THE TETANUS BACILLUS.

Frothingham, (*Am. Jour. Med. Sci.*, May, 1894,) gives the results of his investigation into the methods of cultivating the *tetanus bacillus*. The difficulties attending the cultivation of this organism in pure culture are met with in its isolation from the other organisms with which it is usually associated in the infected wound. Although it is an anærobic bacillus it is not difficult to cultivate it after it is obtained in pure culture. Many methods have been suggested for the isolation of this bacillus, several of which the author reviews. The method suggested by the author, he believes may be of practical use in the diagnosis of tetanus in certain suspected cases of traumatic origin. Without entering into a discussion of his method of obtaining pure cultures of this organism from traumatic origin or from experimental animals, a summary of process is given.

1. "Inoculate alkaline bouillon with the pus from the wound, or, pus being absent, small bits of tissue from inside of the wound, or in experimental animals inoculated with pure cultures, bits of tissue from the regions of the point of inoculation are used.

2. Place tubes in an atmosphere of hydrogen and in the breeding oven for forty-eight hours.

3. Examine microscopically, and if tetanus bacilli are present,

4. Heat from three-quarters of an hour to an hour, in water-bath previously heated to 80° C.

5. From heated tubes inoculate fresh bouillon and place in thermostat under hydrogen for forty-eight hours.

6. Test purity by microscopic examination and make cultures in gelatin, agar, etc.

7. Test virulence on mice, white or gray.

A NEW STAIN FOR GONOCOCCUS.

The importance of a satisfactory method for staining gonococci is obvious in certain doubtful cases of suspected urethritis. Lanz (*Deut. Med. Wochenschrift*, 1894, No. 9), recommends the following method:

A cover-glass preparation, made in the usual way from the secretions, is immersed for from one-half to two minutes in a 20 per cent. solution of trichloracetic acid and washed in water. It is then placed in the stain for from three to four minutes. The stain used is made as follows: 30 cc. of water, 1 to 2 drops of a 5 per cent. carbolic acid solution and saturated alcoholic solution of methylene-blue in sufficient quantity to give to the liquid a deep blue color. After staining the preparation is washed in water, dried in the air and mounted in balsam, or examined at once in water. The gonococci are said to be very nicely stained and clearly differentiated, as the acid used has the effect of preventing the protoplasm of the cells from becoming deeply stained. The author also states that a beautiful double stain may be obtained by after staining with Bismarck-brown.

THE EFFECT OF THE TOXINES OF ERYSIPELAS AND BACILLUS PRODIGIOSUS ON INOPERABLE MALIGNANT TUMORS.

In 1892, Dr. Coley of New York, published a paper on the treatment of malignant tumors by repeated inoculation of erysipelas. Although measurably successful the method has been changed to the use of the toxines of the streptococcus of erysipelas and *bacillus prodigiosus*, obtained from pure cultures of these bacteria. In the July number of *The American Journal of Medical Sciences* Dr. Coley has given the results of his investigation with these toxines and the methods used in their preparation. He summarizes his results as follows:

1. The curative action of erysipelas upon malignant tumors is an established fact.

2. This action is much more powerful in sarcoma than carcinoma.

3. This action is chiefly due to the toxines of the erysipelas streptococcus, which may be isolated and used with safety.

4. This action is greatly increased by the addition of the toxines of *bacillus prodigiosus*.

5. The toxines to be of value should come from virulent cultures and should be freshly prepared.

6. The results obtained from the use of toxines without danger are so nearly equal to those obtained from an attack of erysipelas that inoculation should be rarely restored to.

PALIATIVE TREATMENT OF UTERINE CANCER.

In cases where operation is impracticable as the malignant deposits cannot be removed entire, Boldt (*British Medical Journal*) recommends as the best form of treatment curetting and subsequent cauterization. Curetting and packing with pledgets saturated with chloride of zinc also proves beneficial. If rigid antiseptic precautions be taken piercing of the uterus by the curette may do no harm. The uterus is curetted, then the cavity is sponged with a mixture of commercial acetic acid (1 drachm), glycerine (3 drachms), and carbolic acid (20 grains.) Lastly the cavity is packed with absorbent wool.

Papoid in Diphtheria.

Dr. J. Lewis Smith, of New York, recommends papoid in diphtheria, after an experience in sixty-three cases. He first cleansed the surface with a spray of hydrogen peroxide, and then applied the papoid in the form of a powder.

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SATURDAY, OCTOBER 6, 1894.

EDITORIAL.

THE CAUSATION OF CANCER.

What may be the agent directly the causation of cancer, what its nature and life history, is a problem that, thus far, has eluded all attempts at solution. The experiences of clinical observers accumulated through centuries, had made the medical profession thoroughly familiar with the symptoms and physical signs of the dreaded disease; but this knowledge concerned the results rather that the causation of cancer, and little progress had been made toward successful treatment. Many and divers theories were put forth to account for its existence; none were able to meet all the conditions required, and cancer was accepted as a disease incurable.

The advent of the microscope practically created scientific pathology. The use of instruments of precision rendered possible greater progress toward solution within a decade, than had been accomplished during all the centuries preceding. Pathological anatomy has informed us of the elements, structure and evolution of the morbid condition. It has shown us what cancer is. It has not made manifest its primal cause. The objective has taught us what is the most valuable and accurate of our pathological knowledge. But investigation has now attained a point beyond which the microscope can not penetrate, and other methods are necessary to supplement and complete its revelations. We have learned nothing as to the causation of cancer, nothing as to its prevention, nothing as to its cure. Despite our boasted enlightenment where cancer exists, should metastasis have occurred, the most radical operation of the boldest surgeon is of no avail. Cancer is still classed as a disease incurable.

In this epoch of micro-biology, it is both natural and rational that researchers should apply to cancer those theories which have appeared most satisfactory in the investigation of other diseases, and to regard cancer as a disease of microbic origin. The theory is plausible. It satisfies more of the conditions presented by the disease, than has any other theory thus far advanced. It develops directly the clues given by the microscope. If thus far it has failed of proof, on the other hand it has not been disproved. That cancer presents conditions widely differing from those presented by other diseases

which we now accept as of microbic origin, does not militate against the assumption of such origin. It appears to be analagous to diseases which we know are dependent upon infection with parasites. The most advanced of modern experimenters and observers tentatively catalog cancer as a disease of parasitic origin.

It must be remembered, however, that the "parasitic causation of cancer" accepted as a working hypothesis is one thing, and the "parasitic causation of cancer" accepted as a demonstrated fact, is very different. To seize upon an immature hypothesis and proclaim it as a dogma, is an act of unmitigated folly. The disastrous consequences of such folly have repeatedly been brought home to this generation. It is hardly necessary to mention the cure of consumption by sulphuretted hydrogen, or the rejuvenation of mummies by the elixir of life, or the more recent annihilation of tuberculosis by tuberculin. Similar fads exist today, and still they come. As a working hypothesis, the parasitic causation of cancer is acceptable. But until the theory depends on something more than inference, it is not a proper basis for scientific treatment. The subject is *sub judice* and the testimony of all credible witnesses must be heard and given consideration.

In this connection a report to the British Medical Association, of the results of careful experiments and observations, made by Mr. D'Arcy Power, (*British Medical Journal*), is of interest. This observer assumed that a protozoon was present in cancer, and endeavored to trace it from the tissue forwards into the soil, and thence onward into the animal. His experiments were conducted under conditions approaching, as nearly as possible, those which clinical experience have shown most favorable for the production and development of cancer. The hypothetical protozoon was assumed to be transmitted either through the agency of the soil, or of insects, or possibly through that of water. Selected specimens of soil from localities remarkable for high mortality from cancer, as shown by statistical returns, were prepared in such manner as seemed to fulfill all the conditions for the successful propagation of cancer, if, perchance, there was a cancer organism, and if a part of its life was passed in the earth. Cages of open wire work were put upon the prepared soil, and white rats were placed in the cages so that their feet and tails remained in constant contact with the earth.

Assuming that cancer is produced by an organism, that organism must gain access to the body, unless it be held that the host was born with the germ—an untenable hypothesis. The only ways in which such a parasite could effect entrance into the body is by the respiratory or digestive tracts, by direct inoculation of a wound, or by implantation into the skin or mucous membrane. It has been shown that the healthy uninjured skin of men and animals is permeable to microbes, which enter between the sheath and shaft of the hairs; but not through the orifices of the sweat and sebaceous glands. It has been shown that cancer cannot be produced by feeding experiments. The author's own results prove that it cannot be produced through the mucous membrane. The great difficulty of inoculation from without has been demonstrated, and what would seem positive results in such external inoculations, are not above criticism. It seems therefore that cancer might possibly enter the body through the respiratory system and then pass to the tissues most suitable for their growth and development, as in the case of many infective organisms. On this account the rats were frequently sprayed with cancer pulp, and throughout the experiment care was taken to keep the mucous membrane of their vaginæ in a state of slight but chronic irritation, so as to provide a point

of least resistance. Six rats underwent the same treatment.

Mr. Power relates:—

"They lived upon the soil for about eleven months each; four were killed, and two died, one from cold, and the other, at post mortem examination was found to have a large tapeworm lying free in its peritoneal cavity. A careful necropsy was made in each case, but in no instance could a trace of cancer be detected in any of the organisms or tissues either by the naked eye or microscopically. The lungs of two of the rats which had been subjected to the spray were found to be shrunken, and their edges were studded with dense white nodules. The center of each nodule was softer than the outside, and consisted microscopically of round cells of the type of ordinary granulation tissue, whilst the external portion was formed of the pulmonary alveoli blocked with cells apparently derived from the epithelial lining. There was a considerable quantity of extravasated blood in the vesicles, and the red corpuscles were in many cases undergoing disintegration. Numerous spheroidal and granular cells, such as are common in irritated epithelium, and exactly resembling those found in the segmentation cavity of an incubated hen's egg, lay in the blocked vesicles. They were in all probability eosinophile leucocytes. The deeper portions of the cortex of the nodule consisted of newly-formed fibrous tissue. The explanation of these appearances in the lungs seems to be that as a result of the irritating action of the spray, or of substances introduced by the spray, there was congestion leading to an extravasation of blood into the alveoli; farther irritation led to multiplication of the epithelial cells lining the pulmonary alveoli; finally there was a fibrillation and contraction of the newly formed inflammatory products. In other words, there were set up all the changes leading to the condition known as 'pseudo-tuberculosis,' the results of a defensive or phagocytic inflammation."

Mr. Power, continues:—

"Another question which arises out of a consideration of the etiology of cancer is, How is the disease distributed? The conclusions arrived at by Surgeon Hehir and by the great Italian school of scientific medicine in regard to malaria appear to have a certain bearing upon this question. Ague certainly, and cancer possibly, are produced by specific organisms of the nature of protozoa, which gain access to the body from without."

"The disease cannot be inoculated in either case or, in other words, in neither disease does the organism when once it has been introduced into the body, leave it again in a condition fitted to reproduce the disease. Malaria however differs from cancer in its termination. In malaria there is no tendency on the part of the parasite to kill its host; in cancer the disease usually progresses steadily towards a fatal issue. This at once marks a difference between the two organisms and it may lead to a better knowledge of the distribution of these diseases. In a very able paper, which appeared in the *St. Thomas's Hospital Reports*, for 1892, entitled Specific Diseases Considered with Reference to the Laws of Parasitism, Dr. Payne points out (p. 86) that if death is a usual or frequent consequence of any parasitic disease, it raises the presumption that the vitality of the infecting organism is not destroyed, or even that the continuance of the species may be favoured by this event. Many difficulties at once offer themselves in regard to the parasitic theory of the origin of cancer if it be considered from this standpoint. The disease is too exclusively human for any wide distribution to be effected by the disintegration of the host's body such as takes place in anthrax, the plague, or typhus. It is possible to assume that the hypothetical protozoon causing cancer is only one stage in the alternation of generations which is so frequent in the lower forms of animal and vegetable life, and it is this point which I have endeavored to elucidate, but so far without success. It is of course possible, too, to assume that the cancer germ is exclusively human in its proclivities, as appears to be suggested by the case with which Hahn and von Bergmann are reported to have transferred cancer from one part to another of a cancerous patient's body, though here again their experiments are open obviously to another interpretation."

"The 'cancer organism,' which was described by Dr. Ruffer in his earlier papers, appears to be exclusive human in this sense, for after grafting cancer, upon the irritated mucous membranes of animals I have succeeded in obtaining appearances which resemble these bodies, and which I have not yet found as a result of the simple irritation of tissues, or after the grafting upon them of such normal epithelial cells as those on the anterior surface of the cornea. In the rabbit the structures resembling Ruffer's 'cancer bodies' are intracellular, and are also found between the cells, but they entirely disappear within a week of the introduction of the cancerous tissue, and I have not yet ascertained what becomes of them. They are perhaps, destroyed by the cells which they have invaded. If this be so, and assuming that such bodies are the cause of cancer—an assumption which is still gratuitous, for it has to be proved—we have an explanation of our inability to produce the disease artificially in animals. It may be that the 'cancer bodies' are merely phases in the degeneration of cells, and that, as the changes become more marked, these striking appearances disappear."

"The result of my experiments is negative as regards the propagation of cancer, but interesting preparations have been obtained showing the various forms of cell degenerations. Many of these degenerated cells have been described by different writers as parasites. They are met with, in normal epithelium which has been slightly irritated, and I am therefore bound to confess myself an unbeliever in any of the 'cancer bodies' which have yet been discovered. No evidence has been adduced to show that they are other than the results of cell degenerations, modified, it may be, by the conditions under which they occur, but not differing essentially from the changes which take place in cells as a result of chronic irritation. The cause of cancer has still to be discovered."

ABSTRACTS.

NEW MEANS OF LOCAL ANÆSTHESIA.

One Dr. K. L. Schleich, of Austria, claims to have discovered that absolute immunity from pain, even during protracted operations, may be obtained by subcutaneous injection of a sugar or salt solution, or of merely cold distilled water; that the results induced are to all intents and purposes identical with those obtained by like employment of cocaine. He adds:

The patient may remain perfectly conscious during the amputation of hand and foot without undergoing the tortures so often inflicted upon the battle-field, or the exceptional dangers of syncope ever present in the operating-room when general narcosis is resorted to.

It is declared that this discovery has already borne the test of several experiments and is about to be applied in the hospitals of Vienna. The explanation of the phenomenon is:

Local insensibility to pain is induced in the case of cocaine by purely chemical changes, while cold water or solutions of sugar and salt act mechanically through high pressure and low temperature. Under the influence of high pressure and sudden low temperature the blood and lymph are driven from the places operated upon, to where the pressure is less. The tissues are thus deprived of their supply of blood, and temporary paralysis of nerves results.

The foregoing seems to have met with favor in numerous quarters, and in one instance at least a surgeon of authority affirms that "its importance is all the more undoubted, seeing that if in a given case cold water alone should fail to produce the needful degree of insensibility, a weak and absolutely harmless solution of cocaine would prove certainly efficacious."

Whether true or false, it is hardly probable that surgeons will give up the use of cocaine, which is deemed certain, in favor of a method which will always be apt to carry with it a feeling of indefiniteness.—*Medical Age.*

FEVER.

With development of our knowledge of the acute infectious diseases has arisen the theory that the fever occurring as a part of their clinical picture is the result of the action on the body of certain diffusible products of bacteria which are their cause. With a view to adding definiteness to this theory, Centanni (*Deutsch. med. Woch.*, 1894, Nos. 7 and 8) was undertaken an exhaustive study of the fever of the infectious diseases, his investigation being directed to the determination of the following points: (1) What are the agents which cause the fever in these diseases? (2) What is the mechanism by which they act? (3) What therapeutic deductions are possible from the facts developed? The work is not yet completed, but a number of facts bearing upon the first question have been discovered, and form the basis of a preliminary paper upon the "Fever-producing Poison of the Bacteria."

The investigation extended to seventeen pathogenic species, seven non-pathogenic, and to cultures made from air, water, putrefying animal matter, and urine, without any attempt to separate or identify the several species. From cultures of these germs, *devoid of peptone*, Centanni obtained, by repeated precipitation with alcohol and dialysis, a substance whose chemical properties are quite distinct from those of the bacterial poisons heretofore described (ptomaïnes, enzymes, toxalbumins), which, when injected into animals, causes fever, prostration, loss of flesh, and finally death, if continued. This substance, which Centanni believed to be the same in all species of bacteria, is designated by him "pyrotoxina bacterica." It is believed to be in some way derived from the protoplasm of the germs, or to be elaborated by it, and its production is thought to be a quality of all bacteria. He is led to believe that the fever

accompanying the acute infectious diseases in man is due to an intoxication of the system by this poison, and explains the irregular course of the fever in the different diseases by the theory that the poison depends for its elaboration upon variable conditions, and that it is these conditions which are different in the various diseases, and at different times in the same disease, not the poison.—*Am. Jour. Med. Sci.*

THE SUBLINGUAL ADMINISTRATION OF HYPODERMATIC TABLETS.

Dr. Paulson writes *The Lancet* (London) that he has found a new use for hypodermatic tablets, viz., their sublingual administration. They may in their entirety be placed beneath the tongue, or a solution made in the usual way and a few drops allowed to fall on this organ. He asserts that the medicament thus placed will exhibit its physiological effect almost if not quite as quickly as if employed subcutaneously, particularly if one takes into account the time essential to prepare the syringe before the injection.

It is somewhat curious, if Dr. Paulson's statements are true, that such a method of administering potent remedies should have been so long overlooked; and yet it apparently has a basis of rationality from the fact that beneath the tongue is a large surface covered with thin transparent membrane nourished by a great number of vessels of considerable size, and, moreover, particularly rich in distribution of active absorbents.

There are many cases in which the sublingual method of administration would doubtless be found of infinite service and often preferable to the hypodermatic, not the least of which is the absence of unfavorable impression often created upon the mind of the patient by the latter method. If the inefficiency and celerity of sublingual medication are all that is claimed, it certainly should be wider known and come into very general use.

Another advantage is avoidance of the difficulty oftentimes encountered in employing powerful remedies by the stomach —this organ may be "in a state of rebellion," secreting mucus to shield its irritated membranes, and contracting frequently to relieve itself, consequently one can know little of what proportion of a remedy thus introduced will be absorbed and what proportion merely serve to increase the aggregation of excretion and waste. On the contrary, by sublingula administration the practitioner is not only certain of the dose, and that it will be absorbed within sixty to one hundred and twenty seconds, but is assured of the full physiological result in about ten minutes to a quarter of an hour. Certainly this simple plan is worthy of trial, and we should be very glad to hear from medical men as to the results obtained. It is said that a tablet of pilocarpine introduced under the tongue acts even more quickly and profusely than when employed hypodermatically. Moreover, there is no hypodermatic tablet, satisfactory in composition for use in the syringe, but what should, if all Dr. Paulson claims is true, be equally available and effective when employed sublingually.—*Medical Age.*

Pasteurized Milk.

Pediatric authorities advise that all milk fed to children should be pasteurized in warm weather—that is, raised to a temperature of 168° F., to destroy ferments and prevent souring. This temperature kills tubercle bacilli, typhoid and other germs that may be present in the fluid. It is true that it also renders the casein of the milk less easily digestible, destroys milk-sugar, and causes proteid matter to adhere to fat globules, thus retarding their digestion; but these results are of little importance clinically, except in the case of weak children, while the benefits are many and obvious.—*Jour. of the Amer. Med. Ass'n.*

Gonorrhœa.

Dr. Edward Martin, of Philadelphia, prescribes:

℞	Balsam capaiba............	
	Oil sandal-wood........ ....āā	mv
	Oil cinnamon..............................	mj

In capsule. Of these he gives 6 to 12 daily, administering them one hour after meals.

CURRENT LITERATURE REVIEWED.

IN CHARGE OF ELLISTON J. MORRIS, M. D., AND SAMUEL M. WILSON, M. D.

THE BRITISH JOURNAL OF DERMATOLOGY

for September contains an illustrated article on

The Function of the Sweat Glands in Man,

by Dr. P. G. Unna.

Describing his theory and experiments by which he proved it at length, the author concludes that "the ordinary sweat glands in man secrete fat, which at any time can be proved both on sections of the skin and in the sweat of the hand, by means of treatment with osmic acid—a fat which, though similar to that of the sebaceous glands, is different from it as stearic acid and margaric acid are from oleic acid."

Dr. Malcolm Morris discusses the

Management of Eczema.

The author thinks that as a general rule the less internal remedies we use the better, but that if a constitutional dyscrasia be recognized it must, of course, receive appropriate treatment.

When the skin lesions are acutely inflammatory the use of antimony seems beneficial, and the author gives ten or twelve minims of wine of antimony, repeating the dose in an hour, and, if necessary, in two more. Gradually the interval is increased and the dose lessened until six minims are given three times daily, and this is continued until the inflammation subsides. Arterial tension is an indication for the use of this drug, and depression a positive contra-indication.

Deficient strength and nerve force may call for strychnia, arsenic, belladonna, phosphorus, quinine, etc., but the author thinks diet has only an indirect influence, through its effect on digestion, the general health, etc.

Every case is treated as though it were of parasitic origin, the objects aimed at being the destruction of micro-organisms, the protection of inflamed surfaces, and the relief of inflammation. In following this plan a weak antiseptic is used and the strength gradually increased. Two favorites with the author are sulphur and resorcin, because they not only kill micro-organisms but promote exfoliation of affected cuticle, and he usually commences with an ointment containing ten grains of one of these in an ounce of zinc ointment. When much inflammation is present ichthyol in some cooling "cream" is used.

The plaster mull of Unna, composed of carbolic acid, mercury and oxide of zinc, has been useful in chronic cases where the area affected was limited.

While change of climate is often beneficial, the personal idiosyncrasy plays such a prominent part that one must often choose as much with the object of making a change as for any special property the place chosen possesses.

Dr. Unna demonstrated the presence of more cocci in eczema, and finding that they grow only in the presence of free oxygen, proposes sealing the surface of affected parts, so as to exclude this gas.

Dr. Henry Standford reports a case of

Summer Eruption

somewhat resembling hydroa vacciniform.

THE ST. LOUIS MEDICAL AND SURGICAL JOURNAL

for September. Dr. A. H. Ohmann-Dumesnil advocates the application, on a small wooden spatula, of C. P. nitric acid to mucous patches of the mouth, pharynx, etc., as superior to most other methods of treatment.

Bone Marrow in the Treatment of Pernicious Anemia.

Dr. Thomas R. Fraser, in the *British Medical Journal*, has a very interesting article on the results obtained in pernicious anemia by giving bone marrow. The patient was a gardener, aged sixty years, and had the symptoms of frequent vomiting and diarrhea, edema of the feet and ankles, moderate and irregular pyrexia, dimness of vision, retinal hemorrhages, dyspnea, and latterly complete prostration. The hemocytes of the blood varied from from 1,860,000 to 1,460,000 per cubic millimeter, and the hemoglobin from 27 to 30 per cent., the specific gravity being 1038. There was great distortion in the shape and variation in the size of the hemocytes, which did not form rouleaux. Retinal hemorrhages were present in both eyes. The ordinary treatment of iron and arsenic was instituted and the examination of the blood showed further deterioration. In the fifth week ox-bone marrow was given by the mouth, uncooked, three ounces daily, in addition to the medicines. A rapid improvement ensued. The patient soon recovered strength and body weight, could remain out of bed and appetite was better. At the end of about four months the hemocytes remained at about 3,400,000, the hemoglobin averaged 70 to 75 per cent. and the specific gravity 1059. The patient felt strong and enjoyed doing light manual work. He had no subjective symptoms, and the "hemic," venous and cardiac *bruits* were no longer audible. After eight months' treatment the patient was discharged to return to his occupation as a laborer. The hemocytes were nearly uniform in size, only a few of them showing a slight "tailing" and no mengalocytes were present, there was no excess of the leucocytes or of blood plates, and good rouleaux were formed on the microscopic slide. Inasmuch as it has been demonstrated by physiologists that the colored blood corpuscles are derived from the large, pale cells in the red marrow of bones, especially of the ribs, Dr. Fraser's treatment is especially happy in theory, and apparently successful in this one case.—*A. M. Practitioner.*

PERISCOPE,

IN CHARGE OF WM. E. PARKE, A.M., M. D.

MEDICINE

Two Easy and Delicate Tests for Albumin in Urine.

Dr. C. Fouchlos (*Progres Medical*) recommends two new tests for albumin in urine, for which he claims utmost delicacy and absence of any possible fallacy.

1. Add to the suspected urine a few drops of a 1 per cent. solution of corrosive sublimate; in case of turbidity, add some drops of acetic acid. If the turbidity persists it is due to the presence of albumin.

2. Take 100 cc. of a 10 per cent. solution of sulpho-cyanide of potassium, and mix with it 20 cc. of acetic acid. Add a few drops of this mixture to the urine. If albumin is present in small quantities, an immediate turbidity will ensue; if in large quantities, a heavy white precipitate will appear.—*Med. Review.*

Stomach Washing in the Treatment of Alcoholism.

In an article on the treatment of the alcohol, opium and cocaine habits, Dr. Heine Marks, the progressive surgeon in charge of the St. Louis City Hospital, says in the *Courier of Medicine:*

In cases of acute alcoholism, where a quick restoration to a normal condition is necessary or desirable, I have devised a plan which has never failed to prove efficacious. This is simply washing out the stomach. The apparatus for this purpose consists of a glass funnel inserted in the end of a rubber tube leading into the stomach. Through this I pour plentiful quantities of salt water, until vomiting ensues and the stomach is thoroughly washed out. The patient is then placed in a hot bath and afterward immersed in cold water. In fifteen minutes he is comparatively sober and the next morning perfectly so, and steady too. By this device I have been able to dispense with salts, bromides, chloral and other drugs. This treatment arrests gastritis, and, in experienced hands, never fails of accomplishing the desired result, though in inexperienced hands it might be attended with great danger.—*St. Louis Clinique.*

Rubidium Iodide in Skin Disease.

Dr. Leo Leistikow, of Hamburg, has advantageously used the above salt in a number of cases of secondary and tertiary syphilitic lesions, as well as in a case of gonorrhœal rheumatism. In the case of syphilis complicated with valvular disease, the heart's action was not in the least influenced by the rubidium iodide. Altogether the rubidium salts have no toxic effect upon the heart like the potassium salts. The taste of the rubidium salt is not as disagreeable as that of potassium iodide.—*Medical Review.*

Spray for the Nose and Throat.

In Part Second of "Saunders' Question Compends," No. 14, second edition, just issued, Dr. E. B. Gleason recommends for the purpose of spraying the nose and throat the following formula:

℞ Antipyrin ..... grs. xvi
Aquæ ..... f ʒ j

He says: A solution of antipyrin of the above strength, when sprayed upon the mucous membrane of the nose, pharynx or larynx, has the power of contracting the capillaries and producing an artificial anemia, which effect is maintained for three to five hours. The above solution may be used with the atomizer in all acute inflammations of the mucous membrane of the upper respiratory tract. When used after the application of cocaine to the interior of the nose it will maintain the contractile effect of that drug upon the rectile tissue for several hours when sprayed upon the nasal mucous membrane without the previous application of cocaine, it gives rise to a smarting sensation, which, however, quickly subsides. Applied as a spray within the larynx by means of an atomizer, it contracts the blood vessels of the laryngeal mucous membrane and diminishes secretion, cough and expectoration. It is extremely valuable as a remedy for the night cough of laryngitis phthisica, often securing a night's rest for such patients, who may be provided with an ordinary hand atomizer filled with a solution of antipyrin and instructed to inhale its spray as often as is required to control the cough.

A Hitherto Unnoticed Symptom of Diabetes Mellitus.

Dr. Unschuld (*Berl. Klin. Wochenschrift.*): It is a well-known fact that the diagnosis of diabetes is frequently made only after the disease has lasted for a long time. Years ago Unschuld called attention to three points which frequently mark the course of the disease, namely: (1) Chronic catarrhs of the stomach, especially nervous dyspepsia; (2) certain disorders of sensation in the abdomen, partly explained as hysteria, partly as hypochondriasis; and (3) albuminuria. Since then he has had opportunity to see many hundred cases of diabetes, and has found that one of the most frequent symptoms is cramps in the calf of the leg, a symptom to which hitherto no attention whatever has been paid. These cramps usually show themselves in the morning on waking up or during the night, rarely during daytime. If such cramps are found in persons who, at the same time, complain of weakness and a tired feeling in the morning, the urine should at once be examined for sugar.

The cramps seem to be in no connection with the etiological cause of the disease and

are found in all forms of diabetes. They have no influence upon the course of the disease and usually disappear quickly on the patient getting up and by massage. It is still an unsettled question what they are due to.

Quinine and Pregnancy.

Appended are the deductions from an exhaustive article on this subject in the *Indian Medico-Chirurgical Review* for February, 1894:

1. The existence of pregnancy is no bar to the administration of quinine.
2. For fevers and other affections during pregnancy in which quinine is indicated the effects of the drug are more marked than those of any other.
3. That abortion following the administration of quinine is either the result of the original malady or the effect of idiosyncrasy.
4. That allowing for an idiosyncrasy, in cases in which a tendency to abortion exists and in others as a matter of precaution quinine is best administered combined with a sedative (opium).
5. Hence the old-standing view of the action of quinine on the duration of pregnancy is not borne out by the clinical experience collected in the replies.

Sarsaparilla Must Go.

The general trend of the discussion of the medicinal value of sarsaparilla is that, like the Chinese, it must go The *Medical Record* voices the sentiment of a number of medical men in the following editorial comment:

The esteemed editor of the *Therapeutic Gazette* comes to the rescue of sarsaparilla, and says that it ought to be retained in the Pharmacopœia because it covers the taste of iodide of potassium. This would be rather a weak excuse, even if it were true. But it does not happen to be true, as any one can be convinced by a trial.

The *Gazette* further puts forth the weird hypothesis that sarsaparilla syrup promotes the action of iodide. We venture to say there is not a scintilla of clinical proof that this is the case. The most brilliant results from iodide have often been obtained by enormous doses, after small doses combined with sarsaparilla have failed.

The fact is that the legendary belief in sarsaparilla as a "blood purifier" promotes no end of quackery and useless drugging. Hence physicians, at least, ought to rid themselves of false notions about it.

Pernicious Anemia.

Stengel (*Therap. Gaz.*) says the rapidity of improvement following the use of arsenic stamps it as almost specific. He gives it in the form of Fowler's solution, beginning with two-drop doses, rapidly increasing it to ten drops, and then more slowly to fifteen drops or more. It should always be given after meals. He has seen symptoms of gastric disturbance more frequently subside than become aggravated from its use. Under no circumstances should it be pushed so far as to produce diarrhea. In addition, the patient is at first to be confined to bed, and the diet should be nutritious and easily assimilable. The deficiency of hydrochloric acid in the gastric secretion often requires it to be administered.—*Phila. Polyclinic.*

Treatment of Incontinence of Urine in Children.

Drs. Legendre and Broca (*Revue des Maladies de L'Enfance*), in managing this affection, advise:

1. Examination of the genito-urinary organs for phimosis, stricture of the meatus or hypospadias.
2. Catheterization of the bladder for diagnosis of vesical calculus (rare) or atony of the vesical sphincter.
3. To look for reflex causes—worms, pinworms or too acid urine. This first so-called non-essential variety differs from essential incontinence—incontinence of hysterics and epileptics.
4. Incontinence of central origin, accompanied by enuresis both day and night, and constant mental preoccupation. This form requires suggestive and psychic treatment. Wake the child frequently and have him sleep on a hard bed. Elevate the foot of the bed, avoid drinking in the evening, and educate the bladder to retain the urine during the day. Hydropathic measures, cold sitz baths and ablutions, the general douche, electricity to the hypogastrium and perineum, are indicated. Static electricity is said to act especially upon the sphincter, and may be combined with suppositories of belladonna. This same drug, in pill form, is also valuable. Then, also nux vomica, strychnine and ergot associated with iron, as in the following formula:

℞
Extr. nux vomica, Strychnine, (gr. 1-6) } .....āā 0.01
Extr. ergot, Tartrate iron and potash, (gr. ¾) } .....āā 0.05
For one pill. One to six a day.

The tincture of rhus aromatica has also been recommended from its empiric use (10–100 drops a day).—*Lancet Clinic.*

Treatment of Pruritus Ani.

Dr. A. Berger states that the following method immediately relieves the itching and causes a rapid disappearance of the eczema of the perineum and scrotum which frequently exists in these cases: A cotton pledget, two or three centimeters (¾ to 1¼ inch) in length and steeped in a 2 per cent. solution of hypochlorate of lime, is introduced into the anus. This pledget is allowed to remain until there is a slightly smarting sensation, when it is immediately withdrawn and the anal region washed with the same solution, taking care not to wipe it off afterward.—*International Jour. of Surg.*

A New Symptom Accompanying Enuresis Nocturna.

Sigmund Freund, of Vienna, describes a new symptom which frequently accompanies the enuresis nocturna of children. This consists of a hypertonicity of the adductor muscles of the thighs. It is elicited on an attempt to separate the thighs when the child is sitting with the lower extremities extended on an even surface; marked resistance to passive separation is felt and seen to depend upon involuntary contraction of the muscles named. The same resistance is felt on attempting to flex the leg on the thigh. The observer found no constant relation between the symptoms and the degree and obstinacy of the enuresis. It seemed to occur only with certain forms of incontinence. It is presumed by the author that the enuresis is to be explained by special hyper-innervation of the detrusor vesicæ similar to that that is evidenced by the hypertonicity of the muscles.—*Med. Mirror.*

Is Marriage a Failure?

The Census Bulletin recently published gives the first official data on conjugal life in the United States. It shows that almost three-fifths of our entire population are single, a little more than one-third married, and not quite one-twentieth widowed. The divorces constitute a small fraction at one per cent. The proportion of widows is nearly three times as great as of widowers, indicating that a greater portion of widowers remarry than widows, while figures show that divorced men have remarried to a greater extent than divorced women. The fact that women are, at an earlier age than men, prepared to try the mysteries of matrimony is also proved by the statistics, for while there were only twenty-three males under the age of fifteen who were married, the number of married females under this age was 1,411.—*Kansas City Med. Rec.*

The Specific Gravity of the Urine of the Insane.

After reviewing the labors of several alienists on this point and the variance in their results, Dr. Umberto Stefani, of Padova, made a careful investigation, and studied for one or more months sixty cases of mental diseases, with the following results: In all cases of acute insanity, independent of special forms, the specific gravity ranged from 1030 to 1040, and sometimes higher. If the form is of short duration, the specific gravity will fall as the psychic symptoms diminish, until it reaches the normal, or even lower. When the remission of the psychic symptoms is followed by an exacerbation, the specific gravity of the urine will again increase.

If the course of the disease is long and tends to become chronic, the density of the urine ordinarily will, after a time, commence to diminish until it reaches normal or falls below. In cases of imbecility, paranoia' senile dementia and paresis without spells of excitement, the specific gravity of the urine is not increased. But if continued frenzy and excitement develop, the specific gravity will increase to 1030–1040

The writer throws out the suggestion that in the examination of the urine we have an index, probably, of the prognosis and course of the disease. A table of charts, showing the exacerbations and remissions, adds to the interest of the paper.—*Rivista Sperimentale di Freniatria edi Medicina Legale—Buffalo Med. and Surg. Journal.*

SURGERY.

The Rational Treatment of Appendicitis.

Dr. W. G. Ashton, in the *International Journal of Surgery*, thinks the profession is divided into three classes as regards appendicitis. The first class look upon it as a purely medical disease; the second class are uncertain; and the third class believe that surgery alone is the only rational treatment of this disease. He wishes to show that no one at the beginning knows what course the attack will take, but he believes that all forms are dangerous to life. His conclusions are:

1. That it is impossible with our present means and methods of diagnosis to know the nature of the pathological changes taking place during the course of an attack of appendicitis.

2. That all forms of appendicitis are dangerous to life, as it has been demonstrated that germs pass through the walls of the appendix without the presence of either ulceration or perforation.

3. That surgical interference is indicated in primary and secondary attacks of appendicitis so soon as the diagnosis is clear.

4. That surgical interference is not advised during an acute attack of appendicitis, except when grave symptoms intervene, unless a competent surgeon is at hand. Under these circumstances the case should be operated upon after the so-called recovery.

Hemorrhage After Operations on the Nasal Septum.

Dr. A. C. Getchell, in the *Boston Medical and Surgical Journal*, reports several cases of serious hemorrhage after operations on the nasal septum, from which he concludes that:

1. Operations upon the nasal septum may be followed by hemorrhage sufficient to very materially affect the health of the patient.

2. The artery of the anterior (cartilaginous) septum may lie near the surface, be of considerable size, and if atheromatous may cause serious hemorrhage.

3. Operations upon the nasal septum in adults should be advised only after carefully considering the good to be accomplished and the possible risk incurred.

Treatment of Mammary Abscess.

Paul F. Munde (*The Int. Med. Annual*): My method is very simple, and its simplicity has required but very little modification since its inception. It consists in the proper selection of the case (viz., a fresh abscess, not an old, neglected necrotic cavity), a *large* flat, coarse bathing sponge, two large three-cornered cloths (unbleached muslin or very large square handkerchiefs, folded from corner to corner) or a broad, long roller bandage, a piece of oiled silk large enough to cover the sponge, and some large safety pins. The modus operandi is as follows: The patient presents herself with a large fluctuating abscess of the breast; this is opened by one moderately large radiating incision at the most dependent point, the pus is gently expressed, and the abscess cavity irrigated with a 1 to 10,000 bichloride solution or, what is probably just as good, plain boiled (sterilized) water, all of which is gently squeezed out, and the abscess cavity closed by gentle manual compression by the patient herself, while the other dressing is being made ready. The sponge, which has been previously thoroughly cleansed by boiling and has been freed from sand and other impurities, is now fitted to the shape of the collapsed breast by hollowing it out in the center with scissors so as to admit about one-half of the organ. It is then soaked in as hot water as can be borne by the hand, rapidly squeezed out in a towel, placed over the breast so as to entirely envelop it, covered with the piece of oiled silk, and then uniformly compressed against the thorax with the roller bandage or with the two three-cornered cloths, the first cloth being applied over the lower part of the breast and tied or pinned behind the neck, the other straight around the thorax. Compression should be as tight as the patient can comfortably bear. The other breast, I must not omit to mention, must be protected by a covering of cotton wadding. This dressing is left undisturbed until the next day, except, if necessary, tightening the bandages as they become loose. On the following day the whole dressing is removed, the sponge washed in hot water and reapplied as at first, and this procedure is repeated every day until the abscess is completely healed, which in my experience has seldom been longer than a week. Indeed, the cavity is usually closed after the third daily dressing; but to avoid possible pocketing of pus through uneven application of the compression, it is well to examine the breast carefully each time, and if such pocketing is found, either express the pus through the original incision or make a new opening. I have never had this to occur when I myself applied the dressing, for I have always been particularly careful to adhere to the indispensable axiom of success —that is *uniform, even compression of the breast from the periphery towards the center and from the surface toward the thoracic wall.* Nursing from the sound breast should be suspended until the sick breast is well. The author states that he has used this treatment in every *fresh* case of mammary abscess which has come under his observation in the last eighteen years, and in not a single instance has he failed to achieve a prompt cure.

Thombosis of Veins of the Lower Leg Following Operation in the Trendelenberg Position.

V. Strauch, Moscow (*Centralblatt f. Gyn.*), reports three cases of this distressing complication as occurring in nineteen celiotomies, one of the three being still further complicated by pulmonary embolism, from which the patient happily recovered. The author ascribed the condition partly to the use of ether instead of chloroform, but chiefly to the acute flexion of the leg in the ordinary Trendelenberg position, and now intends to use a table of his own device on which the patient lies with the pelvis elevated but the leg extended. In the same journal Czempin, Berlin, describes his table, which seems to accomplish this result very efficiently.—*Archives of Gynecology.*

Excision of the Initial Lesion.

The early cure of syphilis, if such a thing be possible, is greatly to be desired. Dr. Edmund E. King, in the *Medical News*, makes a plea for the excision of the initial lesion of syphilis. By the early excision he claims that the disease may be aborted and by a later excision the secondary symptoms are moderated. This excision must be done boldly and the cut edges made to unite by first intention. The system is probably infected subsequently to the development of the initial lesion. The lesion should be excised under the strictest antiseptic precautions and the edges cauterized with pure carbolic acid. In his paper he draws the following conclusions:

1. That the early excision of chancres—that is, within a few hours after their appearance —will abort the disease.
2. That the excision of any unhealed chancre will moderate the subsequent secondary manifestations.
3. That excision constitutes the cleanest, least painful and most scientific method of treating the lesion.—*Maryland Med. Journal.*

Cream of Tartar in the Treatment of Gonorrhea.

Dr. Oteri (*Journal de Medecine de Paris*) has employed the cream of tartar in 280 cases of gonorrhea, buboes, chancres and operations on the prepuce. On account of its mild action it is of service in urethral injections, even to five a day. It subdues the inflammation and arrests the discharge. It is possessed of eminent antiseptic and absorbent properties. In profuse suppuration in wounds or cavities with sinous or necrosing walls it will yield good results if applied locally. In buboes, chancres and syphilitic ulcerations, as well as in balanitis, he has found it a good local application. It is cheap, devoid of odor painless, and easily handled.—*Lancet Clinic.*

Diseases of the Heart Muscle in Typhoid and Scarlet Fevers and Diphtheria.

Romberg (*Deutsche Archiv. fur Klinische Medicin*) concludes that the highest grades of parenchymatous degeneration of the heart muscle are present by the end of the second week in typhoid fever, then slowly disappear in the later weeks; interstitial myocarditis begins mostly at the end of the second week, while in scarlet fever it begins mostly on the fourth day, becoming excessive in middle of second week; in diphtheria degeneration begins at the seventh or ninth day, and reaches its highest development at the end of second or beginning of third week, except the characteristic fatty degeneration of diphtheria, which begins often very late. During fever, irregularity and smallness of pulse and dilatation are marked; the best sign of the latter is the galloping rhythm. This is an important physical sign. Amount of urine is usually diminished, slight albuminuria with or without hyaline casts. A bad prognostic sign in diphtheria is a very slow pulse.—*Medical Fortnightly.*

Preparing the Hands for Obstetrical Work.

I have been for some time past, when called to a case of abortion or labor at full term, in the habit of first washing my hands in coal oil and then in warm water, the time occupied not being over three minutes. Time is often of great importance when hemorrhage is profuse, and as kerosene is to be found in every household, there is no time lost in procuring it. After preparing my hands in the above-described manner, I curette the womb with my finger-nail in incomplete abortions and manipulate it in any other way that is necessary without fear of sepsis. Petroleum is of a most penetrating and detersive nature; it will loosen a tap from a bolt in a few hours that has been rusting on it for years.

Coal oil was used by the Persians for illuminating purposes over two thousand years ago and may have been used in obstetrical practice also, but I have seen no mention made of it and I do not believe it is even now in general use, if used at all, for the latter purpose.—*Maryland Med. Journal.*

Fixation in Fractures into Joints.

Dr. Ansel G. Cook, of Hartford, advocates in the *International Journal of Surgery* the fixation of bones in the treatment of fractures into joints, and maintains that there is no fear of ankylosis. His conclusions and rules of treatment are:

1. That bony or serious fibrous ankylosis is the result of injury and subsequent inflammation and not of immobilization.

2. That early passive motion only disarranges the fragments of bone, thereby increasing the production of callus, that it irritates the injured ligaments, and, by increasing the inflammation, tends to produce the ankylosis it is thought to prevent.

3. Immobilization is useful *only* when active inflammation is present, or until the ruptured ligaments and broken bones have thoroughly united.

4. The logical treatment of a fracture into a joint, therefore, should be rest and local applications to reduce inflammation. Reduction of the fracture as early as possible, then immobilization until the bones and ligaments have united (from three to eight weeks, or more, according to circumstances).

5. Passive motion, massage and use till the tissues become normal, or, if the massage fails, complete rupture of all adhesions under an anesthetic. The factors which will ultimately determine ankylosis are the nature of the original injury, the character and duration of the subsequent inflammation, the destruction of bone and cartilage, cicatricial contraction of the soft tissues around the joint, and the age and condition of the patient.—*Maryland Med. Journal.*

For Hæmorrhagic Diarrhœa.

℞ Pulverized alum.....
Catechu, of each..... 5 grains

M. and make four pills.
Sig.: Three to six pills per day.

℞ Alum.....
Catechu, of each..... 2 grains
Crude opium..... ¼ grain
Syrup of red roses.....q. s

M. and make one pill.
Sig.: Twelve pills per day.

OBSTETRICS.

Chloral Hydrate in Labor.

Chloral hydrate, says Dr. John E. Gardner (*Lancet*), has a great effect in assisting dilatation of the os uteri and relaxing the rigidity of the perineum. No post-partum hemorrhage follows, nor is there any delay or difficulty in the expulsion of the placenta. The chloral, I think, might take the place of chloroform, if given in a small repeated dose during the long and tedious labor of the primipara. It does not seem to diminish the expulsive power of the pains, as I have often noticed in chloroform cases. I submit that the chloral might be further tried in place of chloroform in primiparæ in order to relieve the rigid perineum and so avoid having to use forceps. Chloroform, in my experience, is attended with a great tendency to post-partum hemorrhage, which I have never seen after the use of chloral in labor. For many years, I have from time to time experienced its boon to the poor, worn out and anxious mother, despondent with fear. After a dose of the chloral the frenzy passes off, and the patient settles down to her travail, which has a happy and speedy result.—*St. Louis Clinique.*

Superfœtation.

Dr. E. C. Boyle, in the *Charlotte Medical Journal*, reports that after delivering a woman at full term, and expelling the placenta by Crede's method, there followed, in a separate sac, a fœtus apparently three or three and one-half months old. The two placentæ were apparently attached to each other at their margins by a substance resembling the jelly of Wharton, but the circulation in each was independent—there was no anastomosis between the vessels. Both the fœtus and its placenta were normal.

Fetal-Placental Circulation During Parturition.

Caviglia (*Nouvelles Archives d'Obstet.*), after a series of careful observations, has arrived at the following conclusions:

1. Blood passes from the placenta to the child, during the process of birth, through uterine pressure, retraction and sometimes contraction.

2. The constant positive pressure of the fetal vena cava superior forms a resistance opposed to the passage of placental blood by the fetal organism. This resistance is inferior, however, to the force acting upon the placenta and is not sufficient to prevent the afflux of blood.

3. Respiration takes away cardiac force and blood from the systemic circulation, hence it diminishes venous pressure and the special resistance referred to in the second conclusion.

4. The afflux exists but to a slight extent in cyanotic asphyxia, owing to the high blood pressure in the venous system of the child.

5. The arrest of the fetal-placental circulation does not depend upon the diminution of pressure in the fetal-arterial system, but on the occlusion of the placental capillaries by uterine pressure. When the placenta is expelled early the pulsation may continue almost indefinitely.

6. The passage of blood from the placenta to the new-born child often continues after the umbilical arteries have ceased to beat.

7. During the first moments after birth the child's weight occasionally diminishes, on account of relaxation of the uterus. Too early ligature, therefore, involves the risk of removing from the child's circulation not only all the reserve blood, but also some of the blood necessary for the child at any given moment.

The two last conclusions are important in practical obstetrics.—*Archives of Gynecology.*

Painful Dyspepsia.

℞

Bismuthi subnitrat.	gr. x.
Magnes. carbonat.	gr. xv.
Liq. potassæ	mx
Acid. hydrocyan. dil.	miij.
Tinct. zingiberis	mv.
Aq. menth. pip. q. s. ad.	ʒj.—M.

For one dose. To be repeated two or three times daily. Shake well.

—*Therapeutic Gazette.*

Asthma.

℞

Ammon. iodid	ʒij.
Fl. extr. grindel. rob.	fʒss.
Tinct. lobeliæ } Tinct. belladonnæ }	āāʒj.
Syr. pruni virgin.	fʒj.
Aq. destill.	fʒij.

M. Sig.: Teaspoonful three times a day.

—*Med. Review.*

Diagnosis of Pregnancy.

Lawson Tait, in a clinical lecture, points out the great difficulties experienced in obtaining truthful and correct histories from illegitimately pregnant women, and the great caution to be exercised by the obstetrician examining such patients. Several interesting cases are reported from his great experience, in which he himself and others have had but narrow escapes from grave errors in diagnosis through the untruthful histories given by patients. In closing, he recommends the greatest care to be exercised, particularly in regard to the matter of asking questions as to the absence of menstruation. A question should be put in as casual a manner as possible as to when the last period took place; if within a month, exercise the utmost caution to prove that the case cannot be one of pregnancy. The great probability is that it is not one; but the patient may be untruthful, and even regularly recurring menstruation is not incompatible with pregnancy. If the answer given is to the effect that the last period was some months previous to the date of examination, and if the abdominal tumor is of a size which would be that of a pregnant uterus of corresponding date, the chances are infinitely in favor of pregnancy. It should also be ascertained whether menstruation was regular previous to its cessation, and if the ceasing was an abrupt one. If the latter, and the previous menstruations have been regular, the certainty of the diagnosis of pregnancy is complete. If the previous menstruations have been irregular and the cessation not sudden, the history altogether fails, and may be entirely neglected. It should be borne in mind that the adolescent anæmia of young girls suspends their menstrual flow almost invariably, but it does not necessarily interfere with their productive capacity.

The diagnosis of pregnancy is a perplexing question not only in the illegitimately pregnant woman. Even in cases where the patient gives an honest history as far as it is in her power, it is sometimes impossible to tell before the movement of the child is felt. The most careful physicians slip up once in a while on this point, sometimes in what appear to be positive cases.—*Massachusetts Med. Jour.*

Blood In the Secretion of the Mammary Gland.

At a meeting of the Society of Physicians of Warsaw, Dr. Wassilieff exhibited a woman in whom the ducts of the right mammary gland gave exit to milk mixed with

blood. The woman, 30 years of age, had been four times confined. The last accouchement was two years ago, and a year later she had weaned her babe. The flow from the breast, a mixture of blood and milk, had begun a month previously, and its daily amount could not be exactly determined. Microscopical examination revealed the presence of fat-globules, cells in a state of fatty degeneration, and more or less altered blood-corpuscles. There was nothing abnormal as regards the general health or the genital organs. The menses were regular.

Vaginal Secretions in Pregnancy.

Konig (*Amer. Jour. Obstet.*) states that he has found in the lochia the streptococcus most frequently, and but seldom the staphylococcus aureus, and never the staphylococcus albus. After considering minutely the reaction of the vaginal secretion, which in 300 pregnant women he found to be distinctly acid, he concludes that in pathological conditions the secretions attain a much higher degree of acidity, so that the streptococcus pyogenes can hardly thrive therein; at least he was unable to obtain cultures of this germ. He further concludes that the vaginal secretion of every untouched pregnant woman contains nothing pathogenic, the thrush or gonococcus germ excepted. Both are bacteria which upon the usual media of culture are aerobic at the body temperature. The vagina of every untouched pregnant patient is therefore aseptic. Vaginal injections of antiseptics are dangerous in the ordinary patient, as they may chemically lessen the resistance of the tissues to bacteria, and increase the intensity of septic endometritis by washing bacteria into the uterine cavity. —*Medical Standard.*

THERAPEUTICS.

Treatment of Diphtheria.

Weibgen (*Deut. Med. Woch.*, July 19, 1894) describes the treatment pursued in Hahn's clinic since 1880. During the past few years it has been customary to apply an ice collar, and to order hourly gargling with a 4 per cent. solution of potassic chlorate, or, if much fœtor is present, with a ½ per thousand solution of potassic permanganate. If gargling is impossible a spray is used. In nasal diphtheria the nose is syringed out with boracic acid (2 per cent.) or the above-named permanganate solution; if bleeding occurs the nostril is plugged. In mixed infections it is said that large rectal injections (boracic acid 2 per cent.) are useful. If signs of laryngeal obstruction are present on admission it has not always been found necessary to do tracheotomy, as these symptoms may subside under the use of steam. If, however, the dyspnœa is urgent, and the child weak and somnolent with retraction of the soft parts, a low tracheotomy is performed at once. Pneumonia is not a contra-indication to tracheotomy, but marked sepsis is, the dyspnœa here being often due to the infection. The cannula is removed about the fifth or sixth day. If, owing to paralysis, the food gets into the larynx, the cannula is put in again. Sometimes it has been found necessary to feed the patient with a tube. The number of recoveries has steadily increased from 46 per cent. in 1880 to 63 per cent. in 1893 among the non-tracheotomized, and from 20.5 to 40 per cent. among the tracheotomized. The earlier in the disease the child was admitted the better the prognosis. Sixty-five cases have been treated with the specific serum; of these, 72 per cent. of the non-tracheotomized and 44 per cent. of the tracheotomized recovered. The epidemic, however, was of a mild type, and the author says that similar good results have been obtained in previous years in like epidemics. A definite conclusion upon the serum treatment cannot be given until larger numbers are forthcoming, and until the treatment has been in use over longer periods of time (see *Epitome*, May 5, 1894, par 365).—*British Med. Journal.*

EAR, NOSE AND THROAT.

The Treatment of Chronic Suppurative Otitis Media.

Bacon (*New York Eye and Ear Infirmary Reports*) says the usual treatment employed in the simple, uncomplicated cases is syringing the ear with warm water once or several times a day, according to the quantity and character of the discharge, and the instillation of the following drops:

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Zinci sulph.....	gr. ii to gr. iv.
Acid boracic.....	gr. x.
Aq. destil.....	ʒ i.

M.

Other drops used were those containing sulphate of copper or acetate of lead, which should be used when the discharge is not checked by sulphate of zinc.

When small granulations are present, these should be cauterized with nitrate of silver or chromic acid fused on the end of a probe, but when they are of large size or associated with caries, they should be thoroughly removed with Blake's snare or with curettes.

For small polypi or granulations the so-called alcohol treatment, consisting in the instillation of alcohol and boracic acid (20 grains to 1 fluid ounce), is very successful in some instances, while in the treatment of granulations arising from carious walls he has met with marked success in the use of alcohol and iodoform (20 grains to 1 fluid ounce). With some patients it will be necessary to dilute the alcohol one-half with water, as they otherwise complain of pain after the instillation of the drops.—*Thera. Gazette.*

GYNECOLOGY.

The Treatment of Rupture of the Uterus.

Merz (*Archiv. fur Gynakologie*) describes two cases of rupture of the uterus which came under his observation, and tabulates all the hitherto published cases, giving an analytical review of them. In fifty-four cases celiotomy was performed with 48.1 per cent. recovery. He arrives at the following conclusions:

1. If only the trunk and extremities of the fetus have escaped into the abdominal cavity, and the head lies over the pelvis, the woman should be delivered *per vias naturales*, either with the forceps or by perforation and craniotractor.

2. If the head of the fetus or the whole body has escaped into the abdominal cavity, version and extraction, as frequently advised, should not be attempted, but celiotomy should be done at once, and the fetus delivered through the abdominal incision.

3. In the latter case the rupture should be carefully sutured.

4. If the woman has been delivered *per vias naturales* and the conditions are very favorable, celiotomy and suture of the rupture should follow the birth immediately.

5. If the conditions are not favorable, then drainage with iodoform gauze without irrigation should be employed.

6. If the uterus is markedly degenerated, or if septic endometritis has developed, a Porro operation should bed one.—*University Medical Magazine.*

Ventro-Fixation of the Uterus.

After reporting some cases of ventro-fixation, Sinclair (*Medical Chronicle*) concludes a thorough paper upon this subject as follows:

1. The various published series of cases show that the element of danger is almost *nil*. The present writer's series supports this opinion.

2. The operation, efficiently performed, is a permanent cure of the troubles arising from chronic retroflexion of the uterus, complicated with adhesions or inflammatory affections of the tubes and ovaries.

3. When pregnancy occurs after the operation no distress is experienced by the patient and no unusual phenomena are observable during pregnancy, parturition or the puerperal state.

4 Contrary to what might be expected, bladder troubles are quite the exception after the operation, and these discomforts are almost certainly avoidable by care in operating.

5. In a certain proportion of the cases ventral hernia occurs at the site of the cicatrix. How this is to be prevented is one of the problems of the future.

6. After making full allowance for the element of risk and the incidental drawbacks, the operation of ventro-fixation is not only justifiable, but it is indicated in a certain class of cases of retroflexion of the uterus with complications.—*Med. Review.*

OPHTHALMOLOGY.

Affections of the Eyes in Relation to Gynecology and Obstetrics.

Ramsay, of Glasgow, states that at puberty there is an increasing frequency of inflammatory diseases of the cornea, sclerotica, iris and choroid as well as retina and optic nerve. Sharpness of vision and the field of vision is diminished two or three days before menstruation and is most marked on the third or fourth day. The sense of color, especially green, also suffers. Vicarious menstruation in the bulb often has been observed. The most important eye affection of pregnancy is the so-called albuminuric retinitis, consisting in either temporary complete blindness without any marked affection of the retina, or in characteristic lesions of the optic nerve and retina without noticeable loss of vision. The latter is more or less persistent and may in complications with uræmia cause permanent blindness. In the so-called albuminuric retinitis of pregnancy the disease may be limited to one eye, but in chronic nephritis both eyes are usually affected. Separation of the retina may occur with or without albuminuric retinitis. The prognosis is generally favorable. In the puerperal period embolism of the central retinal artery has been known to occur, also ophthalmia and atrophy of the optic nerve after severe hemorrhages. Atrophy of the nerve has been observed in the nursing period with frequent child-bearing also episcleritis in long-continued lactation and stoppage of the tear duct with formation of abscesses. The vitality of the cornea is also lowered by long-continued nursing and slight injury to it may result in protracted suppuration.—*Centralblatt fur Gynakologie.*

New Sign of Lead Poisoning.

In eighteen out of twenty persons affected with lead poisoning M. E. Destree (published in the *Journal de Medecine de Bruxelles*) has observed a narrow zone of hyperesthesia at the level of the articulation of the manubrium with the ensiform cartilage. As a general rule, pressure on the sternum is readily painful only under one or two conditions—namely, when the bone is diseased, as is the case in leucocythemia with lesions of the bone marrow, or when the thoracic wall and the skin are hyperesthetic, as happens in hysteria, sometimes in neurasthenia, and often in chronic alcoholism. But in these latter cases the hyperesthesia is not found to be so limited in extent as it is in lead poisoning. Saturnine hyperesthesia is indeed a symptom of nervous origin, comparable to the intercostal neuralgias observed by Rosenthal. "There is nothing astonishing," says the author, "in the fact that the sternal hyperesthesia is so precisely marked, when we remember that Beau has shown that there is never any anesthesia at the level of the scrobiculus cordis in lead poisoning, and that in lead colic there is very decided hyperesthesia of the abdominal wall."—*New York Med. Journal.*

A Means of Preventing Hemorrhage Consequent Upon Ablation of the Tonsils.

Dr. W. Ward states that this may be accomplished by practicing deep interstitial injections into the tonsils of the following solution:

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Sulphate of iron	gr. xv
Dissolve in:	
Distilled water	ʒijss
Add:	
Hydrochlorate of cocaine, 10 per cent. solution	ʒijss

F. S. A.—For external use.

From thirty to sixty minims of this solution are injected into each tonsil, after which, it is said, scarcely any hemorrhage follows extirpation of the glands.

BACTERIOLOGY.

The Transmission of Bacilli Through the Placenta

from the mother to the fetus is a question which has invoked considerable interesting discussion among pathologists since the causation of disease by micro-organisms has been definitely settled, for hereupon rests the explanation of many of the apparently hereditary diseases. I say apparently hereditary advisedly, for but few would be willing to assert that any of the known micro-organisms are transmitted in a true hereditary manner either through and within the spermatozogoon from the male parent or through and within the ova of the female. This and this only can be true heredity; all received after their junction must in the natural order of development be acquired.

During the earlier investigations on this subject the placenta was believed to present an impenetrable barrier to the progress of micro-organisms toward the fetus, and various theories were advanced to explain the apparent discrepancies; but more recent experiments, especially those of Malvoz and Juequet, have shown that when injuries have been received by the placenta the point of injury may form a point or open door by which pathogenic organisms may gain entry to the fetal organism and there commit their ravages.

The frequency with which the placenta receives injuries can be verified by any obstetrician by a careful examination of placentæ as they are received in his practice, and one would wonder that more cases of apparent heredity do not occur; but rarely indeed can you find an infant that shows unmistakable evidence of tuberculosis, especially at birth. While the books contain vague references to tubercular fetus, we find but one instance recorded in which a systematic examination was made. In this case bacilli were found in the placenta, but not in such positions as to indicate that they had been received from the mother, leaving the question resting upon the experiments above referred to, making true heredity extremely improbable, apparently possible, but rare.—H. C. F., *Columbus Med. Journal.*

ARMY AND NAVY.

CHANGES IN THE U. S. MARINE HOSPITAL SERVICE FOR THE FOUR WEEKS ENDING SEPTEMBER 22, 1894.

Fessenden, C. S. D., Surgeon. Granted leave of absence for thirty days, September 12th, 1894.

Murray, R. D., Surgeon. To proceed to Beaufort, S. C., on special duty, September 20th, 1894.

Bailhache, P. H., Surgeon. Detailed to represent service at meeting of American Public Health Association, September 21st, 1894.

Vansant, John, Surgeon. Granted leave of absence for thirty days, August 30th, 1894.

Hutton, W. H. H., Surgeon. Relieved from Quarantine Inspection duty, and ordered to rejoin station, Detroit, Mich., September 12th, 1894. Granted leave of absence for thirty days, September 20th, 1894.

Sawtelle, H. W., Surgeon. Granted leave of absence for five days, September 14th, 1894.

Gassaway, J. M., Surgeon. Granted leave of absence for one day, September 17th, 1894.

Banks, C. E., Passed Assistant Surgeon. To report at Bureau for temporary duty, September 10th, 1894. Detailed to represent the service at meeting of American Public Health Association, September 21st, 1894. Relieved from temporary duty at Bureau, and directed to rejoin station (Portland, Maine), September 22d, 1894.

Carmichael, D. A., Passed Assistant Surgeon. Granted leave of absence for thirty days without pay, September 6th, 1894.

White, J. H., Passed Assistant Surgeon. Detailed as chairman Board to locate Quarantine station, South Port, N. C., September 13th, 1894.

Bratton, W. D., Passed Assistant Surgeon. To proceed to Wilmington, N. C., for duty, August 27th, 1894.

Wertenbaker, C. P., Passed Assistant Surgeon. To assume command of Delaware Breakwater Quarantine station, August 27th, 1894.

Stimpson, W. G., Passed Assistant Surgeon. To proceed to Port Townsend, Washington, and assume command of Quarantine station, September 10th, 1894. Granted leave of absence for five days, September 15th, 1894.

Brown, B. W., Passed Assistant Surgeon. To report at Washington, D. C., for duty, August 31st, 1894. Detailed as Acting Chief Clerk Marine Hospital Bureau, September 21st, 1894.

Houghton, E. R., Passed Assistant Surgeon. Granted leave of absence for seven days, September 19th, 1894.

Eager, J. M., Assistant Surgeon. To proceed to Mobile, Ala., for temporary duty, September 11th, 1894.

Strayer, Edgar, Assistant Surgeon. To proceed to Pittsburg, Pa., for duty, August 31st, 1894.

Prochazka, Emil, Assistant Surgeon. To proceed to Detroit, Mich., for duty, September 10th, 1894.

PROMOTION.

Rosenau, M. J., Assistant Surgeon. Commissioned as Passed Assistant Surgeon, September 4th, 1894.